

QUR'AN PRIOR TO SCIENCE & CIVILISATION



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QUR'AN prior to SCIENCE & CIVILISATION

EXEGESIS OF 250 QUR'ANIC VERSES

BUGOJNO, 2001/1422. HG

MOTTO

O you unrepeatable Book!
You that bring brightness,

Will I ever penetrate through this wall of secrets?
Where should I depart from this long nightmare?

"Go with the light of dawn and seek...!"
What is the most beautiful? , O you Book!

"The truth is the most beautiful!"
And what is the most unattainable? , O you Book!

"The truth is the most unattainable!"
Tell me, O you Book, how to reach the truth?

"That is an ultimate secret...!
Do Seek...!

In seeking, the beauty of the truth is contained!"

-------------------------------------- B. J. Phiz M.Omer

"The creation of the heavens and the earth is definitely greater thing than the creation of mankind, but most of mankind knows not."
(Qur'an, 40:57)

PREFACE

"And We have sent down to you the Book (the Qur'an) as an exposition of everything, a guidance, a mercy, and glad tidings for those who have submitted themselves (to Allâh as Muslims)."

(Qur'an, 16:89)

What makes us strongly believe that Prophet Mohammad (pbuh) is telling the whole truth, is the fact that his Message is wealthy with exclusive Scientific facts that many people in his time couldn't even figure out. Remember now, we are talking about a Forty year old man lived in Arabia in the middle of the desert and who never worshiped anything in his life, was illiterate and never known for possessing any scientific and Medical knowledge whatsoever, and yet, he revealed scientific facts relating to Biology, Cosmology, Medicine, that are discovered in the 20th century... Now, none of the previous Prophets brought forward such exceptional facts. Mohammad *(pbuh)* was known for his kindness, honesty, and good & straight manners among the Meccans. He never told a lie and never broke a promise.

It must be clarified however, that the faith of Muslims is not conditional based upon whether or not scientific fact coincides with what is found in the Qur'an. If scientific discoveries coincide with what has already been uncovered or mentioned in the Qur'an, it is then viewed as a confirmation of what was already held as true and it may also be a clarification of those matters which may have been beyond the scope of human knowledge at any given time.

It is a standing miracle that up to now, no contradictions to such irrefutable facts have been found in the Qur'an. Assertions to the contrary

have all been refuted as inaccurate, and in many cases stemmed from prejudice or faulty scholarship. This is the stage where physical science may be utilized to help clarify or explain the meaning.

It should also be pointed out that the realm of the unseen, that is, the 'supra' or 'super' natural is something outside the scope of science and therefore cannot be measured or captured by any instrument. Islam insists upon belief in the Divine Creator, angels, revelation, the Hereafter and other matters that are decidedly beyond scientific reach. This work is therefore not directly related to these matters however the following questions are posed:

If the Qur'an is so accurate about matters of science that we can now measure, and this before man's ability to do so, does it not stand to reason that it must be from a source possessing knowledge far beyond that of our own?

Does it not stand to reason that such a source could then accurately relate matters of the unseen, the human soul, and an Afterlife that no human being could possibly scientifically confirm or deny?

We must then seriously consider the greatest message brought forth in the Qur'an and by Muhammad *(sallallahu 'alaihi wa sallam)* regarding the human condition and what awaits mankind.

Bugojno, July, 2001. **Author**

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(1:1) PLURALITY OF THE WORLDS

HOW MANY EARTHS ARE THERE?

If you open the Qur'an to the first surah, you will notice it begins as follows:

"Praise be to Allah, Lord of the Worlds."

(Qur'an, 1:1)

Worlds? Not just one? Yes . . . worlds! There is the physical world, the spiritual world, the world of bacteria, and so forth. That, obviously, is one sense in which we can understand 'worlds'.

Another verse of the Qur'an, however, makes it clear that there are many earths (see Qur'an 65:12). Is it possible that there may be other earths out there?

No one expects to find another earth within our solar system. But scientists say it is likely that in our galaxy there are many earths outside the solar system.

They say that approximately 50 billion stars in the Milky Way rotate slowly, as does the sun. This characteristic indicates that planets that are their satellites surround those stars.

The Bernard Star, for example, is believed to have at least one planetary companion. All the evidence points to the fact that planetary systems are scattered in profusion all over the universe. The solar system and the earth are not unique.

The Qur'an also uses the symbolic plural number 7 to indicate the existence of a plurality of heavens (see Qur'an 2:29, for example). Once again we find that the Qur'an says something and scientists later discover it to be true. Can we resist believing in this book of God? God says:

"Those who disbelieve in the Reminder when it comes unto them (are guilty), for indeed it is an unassailable Scripture. Falsehood cannot come at it from before it or behind it. (It is) a revelation from the Wise, the Owner of Praise"

(Qur'an, 41:41-42)

(2:26) THE GNAT - A SPECIAL CREATURE

The Qur'an frequently summons people to investigate nature and see the "signs of Allah" therein. All living and non-living beings in the universe are full of signs revealing that they are "made", and they are there to demonstrate the power, knowledge and art of their "maker". Man is responsible of identifying these signs by using his wisdom and revere Allah.

While all living beings bear these signs, there are some animals which the Qur'an specially refers to. The gnat is one of these animals. The 26th. Verse of Surat al-Baqara mentioning the gnat is as below:

"Lo! Allah disdaineth not to coin the similitude even of a (female) gnat or any thing above that. Those who believe know that it is the truth from their Lord; but those who disbelieve say: What doth Allah wish by such a similitude? He misleadeth many thereby, and He guideth many thereby; and He misleadeth thereby only miscreants."

(Qur'an, 2:26)

Mostly considered as an ordinary and insignificant creature, even the gnat is worthy of being examined and pondered on since it bears the signs of Allah. This is why "Allah is not ashamed to set forth any parable - (that of) a gnat or any thing above that".

THE EXTRAORDINARY ADVENTURE OF THE GNAT:

What is generally known about gnats is that they are bloodsuckers and they feed on blood. However, this is not a very correct information, because not all the gnats but only the females suck blood. Besides, the females do not suck blood because of their need for food. Both male and female gnats feed on flower nectar. The only reason why females, unlike males, suck blood is their need for the proteins found in the blood that help their eggs to develop. In other words, the female gnat sucks blood just to secure the perpetuation of its generation.

The point to be stressed here is that the above verse points out to the "female gnats". As we have previously mentioned, it is only the female gnats who draw near to the humans and who have the superior features that will be detailed hereafter. Although this important detail was unknown at the time the Qur'an was revealed, it is surely quite considerable that "female" gnats are particularly emphasized in the verse.

The development process is one of the most amazing and admirable qualities of the gnat. The animal transforms from a tiny larva into a gnat after passing through many different phases.

The story of this development can be shortly summarized as follows;

Gnat eggs, which are fed by blood and get developed, are laid on damp leaves or dried ponds by the female gnat during summer or fall. Prior to this, the mother initially examines the ground thoroughly, by using the delicate receptors under her abdomen. Upon finding a convenient place, she starts to lay her eggs. Eggs, which are less than 1 mm. in length, are arranged in a row either in-groups or one by one. Some species lay their eggs joined to each other forming a raft, some of which may contain about 300 eggs.

RESPIRATORY SYSTEM:

The respiratory system of the larva is based on breathing air by means of a hollow tube pulled up over the water surface. Meanwhile, larvae are hung upside down under the water. A viscous secretion prevents water from leaking into the openings through which larvae breath.

The carefully placed white eggs soon start to darken and turn completely black in two hours. This dark color provides protection for the larvae by preventing them to be noticed by other insects and birds.

It takes a winter for the incubation period to be completed. Since eggs are created with a structure that allows them to survive through a long cold winter, they stay alive until spring when their incubation period ends.

GETTING OUT OF THE EGG:

When the incubation period is completed, larvae start to get out of their eggs almost concurrently. The first egg is immediately followed by the others. After that, all of the larvae start to float in water. The larvae, which feed continuously, grow in a short while. Soon, their skin becomes too tight so as not allowing them to grow any further. This indicates that it is time for the first skin change. The hard and brittle skin easily breaks down. Until the development is completed as a whole, the gnat larva is to change its skin two more times.

The method used for the feeding of the larvae is rather impressive. The larvae make small whirlpools in the water with their two fan-shaped extensions made up of feathers, and thus make bacteria and other microorganisms flow towards their mouths. An aerial tube similar to the "snorkel" used by divers provides the respiration of the larvae. They repose upside down in the water. A viscous secretion secreted by their body prevents water from leaking into the openings through which they breath. Briefly, the animal lives with the cooperation of many delicate balances. If it did not have an aerial tube, it could not survive; if it did not have a viscous secretion, its respiratory tube would be blocked.

In the mean time, most of the larvae change their skin once more. The last skin change is rather different from the others. With this last change, larvae pass onto the final stage of their maturation, the "pupal stage". Now, it is time for the larvae, which are sufficiently grown in the larval skin, to get rid of this shell.

However, such a different creature gets out of the shell that it is indeed hard to believe that these two are different developmental phases of the same being. And this metamorphoses is far too complicated and delicate to be designed neither by the larva itself, nor by the mother or any other living thing...

During this latest stage of metamorphoses, the animal faces the danger of being choked, as its respiratory openings rising above the water through an aerial tube are to be closed. However, from that stage on, respiration is not to be done through these holes, but through two tubes newly emerging on the anterior of the animal. This is why these tubes rise to the water surface firstly prior to skin change. During the three or four days long pupal stage, no feeding takes place.

Now, the gnat within the pupa cocoon is mature enough and has taken its final form. The gnat is ready to fly with all its organs and organelles like antennas, trunks, feet, chest, wings, abdomen and large eyes.

GNATS AT THEIR PUPAL STAGE: The pupa cocoon is torn at the top. This stage where a complete gnat emerges is the most fatal stage of all. The greatest risk at

this stage is the leaking of water into the cocoon. However, the torn top is covered with a viscous liquid preventing the gnat's head from contacting water.

The gnat has to get out of its cocoon without having any direct contact with water. Only its feet touch the water surface. This moment is extremely important, as even a soft wind may cause its death. The gnat, which gets out of its cocoon, leaves for its first flight after a rest of about half an hour.

The animal has got out of water without even touching the water...

At this point, we have to ask: How come the first gnat had attained the "ability" to go through such a metamorphosis? Might it be that a larva has "decided" to transform into a gnat after changing skin three times?

Absolutely not; it is quite evident that this tiny animal which Allah gives as an example, has specifically been created as it is.

While the gnat gets out of water, its head should not contact with water at all, because, even one breathless moment may result with the choking of the gnat. Therefore, even a breeze or a tiny roughness on the water surface may be fatal for the gnat.

HOW GNATS PERCEIVE THE OUTSIDE WORLD:

Gnats are equipped with extremely sensitive heat receptors. They perceive things around them in different colors depending on their heat. As this perception is not dependent on light, it is quite easy for the gnat to spot the blood vessels even in a dark room. The heat receptors of the gnat are sensitive enough to sense heat differences as small as 1/1000 C degrees.

The gnat has nearly 100 eyes. These eyes are placed as compound eyes on the top of its head.

AMAZING TECHNIQUE OF BLOOD SUCKING

The gnat's technique of "blood sucking" is unbelievably amazing.

After the gnat lands on its target, it first detects a spot by using the two devices around its mouth. The syringe-like sting of the gnat is protected with a special sheath, which is stripped off during the blood sucking process.

The gnat does not prick the skin by thrusting its sting into it with pressure as assumed. Here, the duty falls to the upper jaw that is as sharp as a knife, and the mandible on which there are teeth bent backwards. The mandible is moved forwards and backwards like a saw and the skin is cut with the help of the upper jaws. When the sting inserted through this cleavage on the skin reach to the blood vessel, the drilling ends. Now it's the time for the animal to suck blood.

However, as known, in the slightest harm made to the vessels, the human body secretes an enzyme that clots the blood and stops its shedding. This should be a great problem for the gnat, because the body would also react to the tiny hole opened by the gnat, therefore, the blood would be clotted and reparation would start. This means that the animal would not be able to suck any blood.

But the problem is specially eliminated for the gnat. Before the animal starts sucking blood, it leaves a special liquid secreted in its body into the cleavage opened in the human vessel. This liquid neutralizes the enzyme that provides for the clotting of the blood. This liquid which prevents clotting causes the itching and swelling of the spot bitten by the gnat.

This is surely an extraordinary process and it brings the following questions to the mind:

1) How does the gnat know that there is a clotting enzyme in the human body?

2) In order to produce a neutralizing secretion in its own body against that enzyme, it needs to know the chemical of the enzyme. How can this be possible?

3) Even if it somehow attains such a knowledge (!), how come can it produce such a secretion in its own body and constitute the "technical rigging" needed to transfer it to its sting?

The answer is obvious; it is not possible for the gnat to perform any of those above. It neither has the required wisdom, or the chemical knowledge, or the "laboratory" environment to produce the secretion. What we talk about is only a gnat of several millimeters without any wisdom or consciousness, that's all!

It is quite clear that it is Allah, "Lord of the heavens and of the earth, and of all that is between them", who has created both the gnat and the man, and donated the gnat with such extraordinary and marvelous features.

"Whatever is in the heavens and on earth, let it declare the Praises and Glory of Allah: for He is the Exalted in Might, the Wise. To Him belongs the dominion of the heavens and the earth: It is He Who gives Life and Death; and He has Power over all things."

(Qur'an, 57: 1-2)

The gnat starts to fly with special sensing systems at its disposal to detect the place of its prey. With these systems, it resembles a warplane loaded with detectors of heat, gas, dampness and odor. It even has an ability to "see in conformity with the temperature" that helps it find its prey even in pitch dark.

(2:135) NAZARENES - the early followers of Jesus

" And they say, `Be ye Jews or Nazarenes, then you will be rightly guided,' Say `Nay, but follow ye the religion of Abraham who was ever inclined to ALLAH; he was not of those who associated gods with ALLAH. "

(Qur'an, 2:135)

The Qur'an refers to the early followers of Jesus as "Nazarenes". This is historically accurate.

The word "Christian" was actually a nickname used by the Romans sometime after Jesus - Acts 11:26 "The disciples were called Christians first at Antioch."

(2:187) ASTRONOMIC TWILIGHT - BORDER BETWEEN LIGHT AND DARKNESS

Do you know that the concept of an astronomic twilight is defined precisely at the time of the Revelation of the Holy Qur'an by determining borders between light and darkness?

"It is made lawful for you to go unto your wives on the night of the fast. They are raiment for you and ye are raiment for them. Allah is aware that ye were deceiving yourselves in this respect and He hath turned in mercy toward you and relieved you. So hold intercourse with them and seek that, which Allah hath ordained for you, and eat and drink until the white thread becometh distinct to you from the black thread of the dawn. Then strictly observe the fast till nightfall and touch them not, but be at your devotions in the mosques. These are the limits imposed by Allah, so approach them not. Thus Allah expoundeth His revelations to mankind that they may ward off (evil)."

(Qur'an, 2:187)

Astronomically, day is being divided into the night and day light. Night is an interval of time passing between two subsequent contacts of the upper point of the sun's disc with the horizon. The former happens at the time of sunset and the latter during the sunrise. Part of the night after sunset, retaining certain relative visibility, is evening dusk or twilight, and of the morning is dawn or daybreak.

Before sunrise and again after sunset there are intervals of time, twilight, during which there is natural light provided by the upper atmosphere, which does receive direct sunlight and reflects part of it toward the Earth's surface.

Depending on an intensity of the approaching light in clear, moonless nights, the following kinds of dusk are distinguished: civil evening and morning and astronomic ones. The astronomic twilight is the longest. At the end of the evening astronomic twilight, stars which a visible by naked eye appear, while at the beginning of dawn they start to disappear. This moment, practically, marks the moment of the dividend between a night and a day.

Hence we distinguish between evening astronomic twilight (starting with setting of the complete disk of the sun and ending when its center descends 18^0 below the horizon) and morning astronomic twilight (starting when the disk ascends to -18^0 and ending with a first contact of the sun with the horizon). Lighting at the end of evening twilight and at the beginning of dawn is only 0,0006 Lucas. Portion of the astronomic twilight, excluding the civil evening twilight interval, is called evening. Similarly, time interval needed for the sun to approach horizon from -18^0 to -6^0 is called pre-dawn. Twilights are the shortest at equator, and longer at larger geographic latitudes.

Based on the presented above, it is easy to connect the given Ayah with a concept of an astronomic dusk, because exactly those 18 determine border between darkness and day, i.e. distinguishing of the *threads*.

(4:56) NERVE ENDINGS AND PAIN SENSATION

The Qur'an on the sensory characteristic of the skin.

"Indeed, those who disbelieve in our signs, we will roast them at a fire. As often as their skins are wholly burned, we will give them in exchange other skins, that they may taste the punishment."

(Qur'an, 4:56)

Scientific facts concerned with pain sensation in the skin.

It was believed until recently that the whole body is sensitive to pain, and it was not known that there are specific nerves in the body which are pain receptors. Modern science discovered that there are about 15 centers for different types of nerve sensation. Medical scientists divided sensation into three groups: Superficial sensation, deep sensation, and compound sensation. Superficial sensation is specific for touch, pain and heat. As for deep sensation, it is specific for muscles and joints. Anatomy has proven that the nerve endings for pain and heat are very close and that the nerve endings for pain sensation are abundant in the skin. So, the skin is the most important part of humans in relation to pain sensation, because of these numerous nerve endings.

Degrees of burns.

There are first and second degree burns, and each is divided into superficial and deep burns. Then there are third degree burns, in which we find that the skin layer is totally damaged and it may even reach to muscles or bones and the skin loses its elasticity and becomes very dry and hard. In this case the patient does not feel much pain because nerve endings are damaged due to burning.

It is well known to specialists today that full thickness burns destroy nerve endings, so that further burning a person after that wont cause any pain.

How such information could have been known at the time of Muhammed is baffling to people who would attribute a human origin to the Quran. The Quran states clearly that people will be given a "new skin" for the purpose of pain, thereby linking skin loss with the loss of nerve endings that cause pain.

The Koran informed us about this over 1400 years back when people knew nothing about full thickness and partial thickness burns and their anaesthetic effect.

The skin is the center of sensitivity to burns. Thus, if the skin is completely burnt by fire, it looses its sensitivity. It is for this reason that Allah will punish the unbelievers on the Day of Judgement by returning to them their skins time after time, as He, the Exalted and Glorified, said in the Qur'an.

"***This is no less than a reminder to (all) the worlds. And you shall certainly know the truth of it (all) after a while."***

(Qur'an, 38:87-88)

(6:125) THE EFFECT OF HIGH ALTITUDE ON MAN AS EVIDENCED BY THE SCIENTIFIC SIGNS IN THE QUR'AN AND BY MODERN SCIENCE

Another scientific knowledge that was referred to in the Qur'an centuries before man's actual discovery of it relates to the composition of the atmosphere. It is now known that the higher we ascend in the sky the less air we would find, and thus the less oxygen so vital for respiration. A person flying at great heights in aircraft or air balloon would feel a sharp contraction of the lungs causing pain.

At the time of the revelation of the Qur'an in the 7th century, no one would have known that ascending in the sky would cause constriction and pain in the chest, simply because it was way before the age of air flight (ascending in the sky).

Allah The All Mighty says in the Qur'an:

"So, whomsoever ALLAH intends to guide, HE expands his bosom for the acceptance of Islam; and whomsoever HE intends that he should go astray, HE makes his bosom narrow and close, as though he was mounting up into the skies. Thus does ALLAH inflict punishment on those who do not believe."

(Qur'an, 6:125)

It has been proven by aeronautics that when man is exposed to high altitude, space; he suffers from some physiological symptoms that would vary between feeling tightness in his chest and getting into a critical stage if he continues being exposed to high altitude and low atmospheric pressure. Is there any relationship between what was mentioned in the verse and recent scientific discoveries??

Scientific facts concerning the state of man in high altitude:

1. Layers of the atmosphere and its physiological effect on man:

a. The Physiologically Sufficient area for human being is from sea level up to 10,000 feet above sea level. The oxygen in this layer is physiologically sufficient for human survival.

b. The Physiologically Insufficient area, is between 10,000 -50,000 feet. In this area there is a deficiency in oxygen, in addition to low atmospheric pressure. This would result in clear physiological symptoms on the human body, and so symptoms of Hypoxia (oxygen deficiency) and Desparism (low atmospheric pressure) take place.

c. Near Space Area (of the earth): from 50,0,000 feet. From the physiological point of view man can't live in altitudes higher 50,000 feet even if he breathes 100% oxygen. He should then wear a space suit to tolerate the decrease in atmospheric pressure and oxygen deficiency.

2. Symptoms of the stages of Hypoxia:

This is divided into four stages depending on the atmospheric pressure , altitude and blood oxygen concentration.

a. From sea level to 10,000 feet no symptoms of Hypoxia appear.

b. From 10,000-16,000 feet physiological compensatory systems of the human body prevent symptoms of Hypoxia from appearing except if the period of exposure is too long. Then breathing becomes faster and deeper, pulse and blood pressure also increase.

c. From 16,000-25,000 feet, physiological systems do not function and cannot provide tissues with sufficient oxygen, and the afore mentioned symptoms appear. At this stage we find a clear explanation of the tightness of the chest one feels at this altitude (Note: Qur'an verse 6:125).

d. The Critical Stage is from 25,000 feet and higher. At this stage man completely loses consciousness due to the failure of the nervous system. Changes that occur in the chest reach their maxima at this altitude and then there will be complete physiological failure of heart functions and respiration.

3. Drop in Atmospheric Pressure:

When man is exposed to low atmospheric pressure at high altitude (as what happens to air passengers when the pressure adjustment system fails inside the airplane), several symptoms occur as a result of the expansion of gases and their increase in the human body. Gases confined in the body cavities such as the stomach, when expanding press on the lungs, which cause breathing difficulty , disturbances, and tightness of the chest. The same thing would happen in the colon, lungs, teeth, middle ear and sinuses and all this causes severe pain in the body. In addition to this all gases dissolved in the body cells e.g. nitroge, would cause suffocation leading to severe chest pain.

Scientific signs in the Qur'an:

The Holy Qur'an in verse: "And whomsoever He wills to send astray He makes his breast closed and constricted....... "6:125 mentions that tightness would occur in the chest when going up in the sky, which has now been proven by modern science. Ascending to higher altitudes causes the symptoms of Hypoxia and Desparism. This leads to tightness of the chest because of the expansion of gases in the body cavities and their pressure on the lungs. In addition to this the evolving of the dissolved gases (in the body) in the form of bubbles at high altitude causes severe chest pains. So the words of Allah "He makes his breast closed " present a brief and precise explanation to the physiological changes occurring in man at these high altitudes. This scientific fact mentioned in the Qur'an, was not discovered except after years of research. As for the word "constricted " it refers to what happens to man when he continues to rise in high altitude until he gets to the Critical Height as mentioned before which is 25,000 feet and higher when man loses consciousness due to failure of the nervous system.

(6:133) THE EVOLUTION and disappearance of species

There is not one iota of evidence to suggest that one species of hominid evolved into another. Their existence (of some) has been determined, one species disappears and the other SUCCEEDS it. There is however no scientific evidence to defend the theory that man [Homo Sapiens] are descended from the lineage of the great apes.

"If (God) wills, He destroys you and in your place appoints whom He wills as SUCCESSORS just as He brought you forth from the descendants of other peoples."

(Qur'an, 6:133)

"Indeed, We created them and strengthened them. And when We willed, We replaced them completely by people of the same kind."

(Qur'an, 76:28)

(7:40) BLACK HOLE SINGULARITY

The event horizon is where the force of gravity becomes so strong that even light is pulled into the black hole. Although the event horizon is part of a black hole, it is not a tangible object. If you were to fall into a black hole, it would be impossible for you to know when you hit the event horizon.

The singularity is not really a tangible object either. According to the General Theory of Relativity the Singularity is a point of infinite space-time curvature. This means that the force of gravity has become infinitely strong at the center of a black hole. Everything that falls into a black hole by passing the event horizon, including light, will eventually reach the singularity of a black hole. Before something reaches the singularity it is torn apart by intense gravitational forces.

Even the atoms themselves are torn apart by the gravitational forces.

NEEDLE HOLE

After discovering of black holes, scientists found that there must be a center spot where the gravity is maximum. Then they found that black hole eventually collapses to the point of zero volume and infinite density, creating what is known as a "singularity". As the density increases, the path of light rays emitted from the star are bent and eventually wrapped irrevocably around the star. The space was piercing in "singularity" and there is no time in here!

According to Stephen Hawking and other scientists, the contact with other universes starts here! They think that there must be other universes but the physics rules must be different with our universe. There is no attraction, no light speed, no time in other universes.

Scientists say that the largeness of singularity is like a NEEDLE HOLE. There are some things in Qur'an on this subject:

"Certainly the DOORS OF UNIVERSE won't open to the liers, and they cannot enter to Heaven if camel don't pass from NEEDLE HOLE."

(Qur'an, 7:40)

(7:54) THE SEQUENCE OF DAY AND NIGHT

At a time when it was held that the Earth was the center of the world and that the Sun moved in relation to it, how could any one have failed to refer to the Sun's movement when talking of the sequence of night and day? This is not however referred to in the Qur'an and the subject is dealt with as follows:

Sura 7, verse 54: ***"(God) covers the day with the night which is in haste to follow it..."***
Sura 36, verse 37: ***"And a sign for them (human beings) is the night. We strip it of the day and they are in darkness."***
Sura 31, verse 29: ***"Hast thou not seen how God merges the night into the day and merges the day into the night."***
Sura 39, verse 5: ***"He coils the night upon the day and He coils the day upon the night."***

The first verse cited requires no comment. The second simply provides an image. It is mainly the third and fourth verses quoted above that provide interesting material on the process of interpenetrating and especially of winding the night upon the day and the day upon the night. (sura 39, verse 5) 'To coil' or 'to wind' seems, as in the French translation by R. Blachere, to be the best way of translating the Arabic verb *kawwara.*

The original meaning of the verb is to 'coil' a turban around the head; the notion of coiling is preserved in all the other senses of the word. What actually happens however in space?

American astronauts have seen and photographed what happens from their spaceships, especially at a great distance from Earth, e.g. from the Moon. They saw how the Sun permanently lights up (except in the case of an eclipse) the half of the Earth's surface that is facing it, while the other half of the globe is in darkness.

The Earth turns on its own axis and the lighting remains the same, so that an area in the form of a half-sphere makes one revolution around the Earth in twenty-four hours while the other half-sphere, that has remained in darkness, makes the same revolution in the same time.

This perpetual rotation of night and day is quite clearly described in the Qur'an. It is easy for the human understanding to grasp this notion nowadays because we have the idea of the Sun's (relative) immobility and the Earth's rotation. This process of perpetual coiling, including the interpenetrating of one sector by another is expressed in the Qur'an just as if the concept of the Earth's roundness had already been conceived at the time-which was obviously not the case.

"This is no less than a reminder to (all) the worlds. And you shall certainly know the truth of it (all) after a while."

(Qur'an, 38:87-88)

(7:54) SIX DAYS OF CREATION OR SIX PERIODS?

Today we know that the creation process can be measured in billions of years.

The priestly editors or the Bible could not have known this. In their eagerness to enjoin Sabbath observance on others they wrote that God rested on the very first Sabbath day after finishing up his work of creating the heavens and the earth.

The six days of creation in the book of Genesis, then, are clearly like six days of any seven-day week. The Priestly editors have made it clear that a day is meant a period from one sunset to another. Six days meant from Sunday to Friday. They believed that the reason the Sabbath day became holy is that God Himself had rested on that day. Thus the editors tell us:

"By the seventh day God had finished the work he had been doing; so on the seventh day he rested from all his work. And God blessed the seventh day and made it holy, because on it he rested from all the work of creating that he had done" (Genesis 2:2).

If that is not far enough, the editors took the idea that God rested farther still when they wrote as follows: "In six days the Lord made heaven and earth, and on the seventh day he rested, and was refreshed" (The Holy Bible, King James Version, Exodus 31:17).

The idea that God rests like humans and gets refreshed like humans had to be corrected by Jesus, on whom be peace, when, according to John, he declared that God never stops working, even on the Sabbath day (see John 5:16). God clarified the matter in His own words when he declared:

"And verily we created the heavens and the earth and all that is between them in six days, and naught of weariness touched us."

(Qur'an, 50:38 see also v. 15)

The above Qur'anic verse clearly refute the idea that God rested. God, according to the Qur'an does not get tired.

"Neither slumber nor sleep overtakes him."

(Qur'an, 2:255)

But how about the period of creation? Was that six days in the Qur'an too? In the above quotation from the Qur'an the term translated 'days' could mean, not just 'days', but also 'long periods of time', an indefinite period of time (but always long).

Qur'an also speaks of

"A day whereof the measure is a thousand years of your reckoning"

(Qur'an, 32:5)

The Qur'an also speaks of a day whereof the measure is 50,000 years**:**

*"The Night of Power is better than a thousand months.
The angels and the Spirit descend therein, by the permission of their Lord, with all decrees."*

(Qur'an, 70:3,4)

Long before our modern ideas of the length of time involved in the creation, commentators of the Qur'an understood that when the Qur'an speaks of six days of creation, it does not mean six days like ours, but rather six periods. Abu al Su'ud, for example, writing in the sixteenth century, understood it as six events.

Again, we see that the Qur'an has avoided repeating an error which was established in a previous book an error that will not be discovered until modern times. In view of this, can anyone insist that the Qur'an is the work of a man?

(10:5) NATURAL AND REFLECTED LIGHT

On the other hand, planets do not emit any light of their own, but only reflect light. This differentiation between natural light and reflected light is pointed out with the words:

"Blessed is He who made constellations in the sky and placed there in a lamp, and a moon giving light."

(Qur'an, 25:61)

And also:

"It is He who made the sun to light up (the sky) and the moon that is lit."

(Qur'an, 10:5)

(10:5) THE GREATEST SPEED - SPEED OF LIGHT

The greatest speed C, denoting the velocity of light in vacuum, is hinted at in two glorious Qur'anic verses relating this fundamental universal constant C with the motion of the Earth-Moon system. A new relativistic interpretation of this Qur'anic relation gives C=299792.5 km/s in an extremely marvelous agreement with the accepted international value. This astonishing result emphasize the unity of the physical world, the validity of the special theory of relativity and the authenticity of the Glorious Qur'an for unbelievers.

Introduction:

The velocity of light C in vacuum belongs to a small group of the fundamental constants; however, it occupies an outstanding position even within this group. First of all, it is encountered in very different branches of physics. It will come, as no exaggeration if one says the story of the determination of the velocity of light is a

concise history of physics. And this story has not come to an end yet.
From the ancient Greeks down to the Middle ages, the speed of light was believed to be infinite. Aristotle believed that light propagates instantly! In the eleventh century, an Arabic scientist Alhassan suggests that light travel at a finite speed. Galileo (1600) tried this speed but he failed saying that light is extraordinarily rapid. Roemer (1676) was the first measuring C using the eclipses of the Jovian satellite Io. He obtained an inaccurate value of C (215000 km/s) because the diameter of the earth's orbit was not known exactly.

Starting from 17th century, experiments show the progress of methods and techniques in the determination of the speed C.

Froome's value was considered to be the most accurate for a long period until 1983 when the modulated laser radiation interferometers were applied for the determination of C with great precision.

According to the US National Bureau of Standards: C = 299792.4574 + 0.0011 km/s, and according to the British National Physical Laboratory C = 299792.4590 + 0.0008 km/s.

According to Einstein's general theory of relativity (1917), the law of the constancy of the velocity C of light in vacuum can not claim any unlimited validity because the curvature of rays of light can only take place when the velocity of propagation of light varies with position! Einstein himself solved this contradiction between special and general relativity declaring in his paper written (1917):

"The results of the special relativity hold only so long as we are able to disregard the influence of gravitational fields on the phenomena".

This validity condition of the second postulate of special relativity is considered in the present work because the constancy of the velocity C needs absolute space (vacuum). To attain vacuum in the Einstein's sense of this word it is not sufficient just to eliminate from a volume of space every atom, molecule and particle, it is necessary also to get rid of the gravitational field. Therefore we have screened out the effect of the solar gravitational field on the geocentric orbital motion of the moon, which is considered here, according to the applied Qur'anic equation; as a standard measure reference for evaluating the greatest cosmic speed described in the Holy Qur'anic verses.

Lunar Orbital Motion described in Qur'an:
Fourteen centuries ago, the QUR'AN, i.e. the Holy Book of Islamic Religion, was directed from GOD to all humanity through Prophet Mohammad, who lived in the Arabian Peninsula.

The ARAB people use the lunar system in their calculation of time. The Qur'an addressed them in the only language they could understand without upsetting their habits. GOD (in Arabic ALLAH: the ONE and Only GOD, the CREATOR) says in the Qur'an:

"GOD is the ONE who made the sun a shining glory and the moon a light and for her ordained mansions, so that you might know the number of years and the reckoning."

(Qur'an, 10:5)

The lunar year is twelve months; the month is defined recently as the time of one revolution of the moon in its orbit around the earth. God hints at such orbit in the Qur'an:

"GOD is the ONE who created the night, the day, the sun, and the moon. Each one is traveling in an orbit."

(Qur'an, 21:33)

Here an essential scientific fact is clearly stated, namely, the existence of the earth's, sun's and moon's orbits; besides, a reference is made to the traveling of these celestial bodies in space with their own motion! A new concept had therefore been established in the Qur'an, hundreds of years before it was discovered by modern science.

Today the concept of the lunar year is widely spread and, as we know, the moon is our nearest neighbor in space, and a companion to our planet. It is often said that the earth and moon form a twin-planet. As the moon orbits around the earth, the change in the relative positions of the moon, earth and sun cause the moon to show its phases. The time between consecutive new moons is 29.53 days and is called the synodic month. During this time, however, the earth, and consequently the moon's orbit, have traveled some way around the sun, so the position of the moon against the background of stars is different. Time for the moon to return to the same position in the sky as viewed from earth is called the sidereal month (27.32 days) which represents the actual real net time of one revolution in the moon's orbit. This orbit is almost circular having an average radius r=384264 km.

Referring to the Qur'anic verse (10:5), we notice that it discriminates between the apparent synodic period for knowing the number of years and the real sidereal period for reckoning in scientific calculations.

Period	Sidereal	Synodic
Lunar Month T	27.321661 days = 655.71986 hours	29.53059 days
Terrestrial day t	23 h, 56 min 4.0906 sec = 86164.0906 sec	24 hours = 86400 sec

The aim of this work is to determine the value of the greatest speed mentioned in the following relativistic Qur'anic verses. In these verses the sidereal system should be used for both the lunar month and the terrestrial day as accurate measured periods (with respect to a distant apparently fixed star).

A New Relation in the Earth-Moon System:
The length of the moons' orbit L and the time t of one terrestrial day are correlated in a marvelous Qura'nic verse which describes a universal constant velocity of a certain cosmic affair as follows:

"GOD rules the cosmic affair from the heavens to the earth. Then this affair travels, to Him (i.e. through the whole universe) in one day, where the measure is one thousand years of your reckoning."

(Qur'an, 32:5)

The Qur'anic expression "of your reckoning" leaves no doubt as to our understanding of the year as the lunar year.

The verse begins with a reference to a certain "cosmic affair" which GOD creates and commands. This affair travels, permanently through the whole universe between the

heavens and the Earth, so speedily that it crosses in ONE DAY a maximum distance in space equivalent to that which the moon passes during ONE THOUSAND LUNAR YEAR (i.e. during 12000 Sidereal months). The question that pause itself now is: what could this cosmic affair be and what is its greatest velocity as expressed in this Qur'anic equation?

To answer this question. The above Qur'anic verse has been understood in terms of the following equation:

Ct = 12000 L

Where: C is the velocity of the cosmic affair, t is the time interval of one terrestrial sidereal day defined as the time of one rotation of the earth about its axis (relative to the stars) i.e. 23 hr, 56 min, 4.0906 sec = 86164.0906 sec)

L is the inertial distance which the moon covers in c-o revolution around the earth during one sidereal month i.e. L is the net length of the moon's orbit due to its own geocentric motion, without the interference of its spiral motion caused by the earth's revolution around the sun, i.e. - is the lunar orbit length excluding the effect- of the solar gravitational field on the measured value.

Let V is the measured average orbital velocity of the moon deduced from the average radius R of the lunar geocentric orbit measured from an orbiting earth during its heliocentric motion.

V=2 Pi *R/T.............. (2)

substituting R = 384264 km and T = the sidereal lunar month = 655.71986 hr

V= (2x3.14l6x384264)/ 655.71986= 3682.07 km/hr

This value is given in all textbooks of astronomy and is accepted by NASA.

Let @ is the angle traveled by the earth moon system around the sun during one sidereal month of period 27.321661 days. We can calculate @ if we take into consideration the period (365.25636 days) of one heliocentric revolution (1 year) of the earth-moon system.

27.321661*360/365.25636= 26,92848

Thus @ is a characteristic constant of this system depending on uniform periods of the month and the year.

Since the presence of the sun changes the geometrical properties of space and time , we must screen out its gravitational effect on the earth moon system according to the validity condition of the second postulate of special relativity, i.e. we must only consider the lunar geocentric motion without the heliocentric motion of the earth-moon system. Thus a velocity component VO=V cosO representing the net orbital velocity of the moon is introduced for calculating the net length L of the lunar orbit assuming a stationary earth.

L = V cos @ T .... (3)

From equation (1) and (3) we get a new relation for the earth moon system:

Ct= 12000 V cos @ T..........................(4)

Ct =12000 V cos @ T/t.............(5)

Substituting the sidereal values of the periods t and T from table (2), the NASA value of the measured orbital lunar velocity V = 3682.07 km/hr., and the calculated value of cos@ = cos 26.92848 = 0.89157, we get the velocity of the cosmic affair from eq. 5 as expressed in the Holy Qur'an.

C=12000 x 3682.07 x 0.89157 x 655.71986/86164.0906

C = 299792.5 km/s

Referring to the international value of C = 299792.458 km/s we find an extremely marvelous agreement. Thus we conclude that the cosmic affair, mentioned in the previous Qur'anic verse, is identical to LIGHT and all similar cosmic affairs traveling in vacuum with this maximum speed such as: all types of electro magnetic waves propagating between the heavens and the earth, the expected Gravitational waves spreading all over the universe, and all particles traveling in this cosmic greatest speed such as neutrinos.

It is very interesting to mention here the second Qur'anic verse that hints at the same relativistic Qur'anic equation in the earth-moon system: God Most High said:

"A day in the sight of thy Lord is like a thousand years of your reckoning."

(Qur'an, 22:47)

Conclusion:

It is both important and interesting to find a new astronomical relation between the radius of the lunar orbit R and the time t of one terrestrial day deduced according to a new relativistic interpretation of a cosmic Qur'anic verse alluding to the greatest universal speed identical to the velocity C of light in vacuum.

It is so awesome to find unity in the complex of phenomena, that at first sight appear to have nothing in common. This work proves the universality and constancy of the fundamental constant C as the Greatest Cosmic Speed and reveals the Glorious Qur'an as a Holy Book worth studying with meticulous analysis since its author is the CREATOR of the Universe.

(10:24) TIME ZONES - EARTH ROTATION

"The likeness of the present life is only as water which WE sent down from the clouds, then there mingles with it the produce of the earth, of which men and cattle eat till when the earth takes on its ornament and looks beautiful and its owners think that they have full power over it, there comes to it by Our command by night or by day and WE render it like a mown down field, as if nothing existed there the day before. Thus do WE expound the Signs for a people who reflect."

(Qur'an, 10:24)

The reason the Almighty Allah (swt) said " by night OR day " because if the Hour would to take place during the day time in America, then it will be night time in Australia, and vice versa. Judgment day happens to all earth regardless if it is a night or a daytime. That's why Allah (swt) said "night OR day". This is a scientific fact that Earth does rotate around its self for us to have the day and night.

Seeing as back fourteen centuries ago people probably did not understand much about *time zones*, the Qur'an's statements about this subject are considerably surprising. The concept that one family is having breakfast as the sun comes up while another family is enjoying the brisk night air is truly something to be marveled at, even in modern time. Indeed, fourteen centuries ago, a man could not travel more than thirty

miles in one day, and thus it took him literally months to travel from India to Morocco, for example. And probably, when he was having supper in Morocco, he thought to himself, "Back home in India they are having supper right now." This is because he did not realize that, in the process of traveling, he moved across a time zone. Yet, because it is the words of Allah, the All-Knowing, the Qur'an recognizes and acknowledges such a phenomenon.

In the verse 10:24 it states that when history comes to an end and the Day of Judgement arrives, it will all occur in an instant; and this very instant will catch some people in the daytime and some people at night. This clearly illustrates Allah's divine wisdom and His previous knowledge of the existence of time zones, even though such a discovery was non-existent back fourteen centuries ago. Certainly, this phenomenon is not something which is obvious to one's eyes or a result of one's experience, and this fact, in itself, suffices as proof of the Qur'an's authenticity.

(10:34) GENETIC CODE REPRODUCTION

There's a genuine enigma, ignorance faced by the medical and biological community throughout the world: THE ORIGIN OF THE GENETIC CODE AND THE MECHANISM BY WHICH IT IS EXPRESSED. NO ONE HAS BEEN ABLE TO DEMONSTRATE HOW THE INCREASE IN THE DATA CONTAINED IN THE GENES LEADS TO MORE AND MORE COMPLEX STRUCTURES.

The One who originated the genetic code has the power to reproduce it, to add to it or take away from it. For a person having knowledge of the Koran, there's no enigma at all.

" Say: 'Is there any of your associates [whom you hold equal to God], one who produces creation then reproduces it?' Say:`Allah (God) produces creation then reproduces it. How, then are you mislead."

(Qur'an, 10:34)

(10:61) SUBATOMIC PARTICLES

"And thou art not engaged in anything, and thou recitest not from HIM any portion of the Qur'an, and you do no work, but WE are Witness of you when you are engrossed therein. And there is not hidden from thy Lord even an atom's weight in the earth or in heaven. And there is nothing smaller than that or greater, but it is recorded in a clear Book."

(Qur'an, 10:61)

Many centuries before the onset of Muhammad's prophethood, there was a well-known theory of atomism advanced by the Greek philosopher, Democritus. He and the people, who came after him assumed that matter consists of tiny, indestructible, indivisible particles called atoms.

The Arabs too, used to deal in the same concept; in fact, the Arabic word dharrah commonly referred to the smallest particle known to man. Now, modern science has discovered that this smallest unit of matters (i.e., the atom, which has all of the same properties as its element) can be split into its component parts. This is a new idea, a development of the last century; yet, interestingly enough, this information had already been documented in the Qur'an which states:

"He [i.e., Allah] is aware of an atom's weight in the heavens and on the earth and even anything smaller than that..."

(Qur'an, 34:3)

Undoubtedly fourteen centuries ago that statement would have looked unusual, even to an Arab. For him, the dharrah was the smallest thing there was. Indeed, this is proof, that the Qur'an is not outdated.

An atom of an element is the simplest particle that displays the properties of the element.

The atomic theory has four assumptions: Atoms make up all matter. A somewhat modern theory was put forward by an English schoolteacher, John Dalton in 1808. This Dalton theory described how atoms interacted to form compounds, but never even considered the possibility of subatomic particles. J. J. Thomson discovered the first of the subatomic particles, the negatively-charged electron, in 1899.

The modern view of the atom proposes that there are 3 subatomic particles.

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<u>Elementary Particles</u>:

Today scientists have identified many other particles within atoms, but the three simple subatomic particles—the electron, the proton, and the neutron—are still used to explain many properties of atoms.

More than 200 subatomic particles have been discovered so far, however most are not fundamental, but are composed of other, simpler particles. For example, Rutherford showed that the atom was composed of a nucleus and orbiting electrons. Later physicists showed that the nucleus was composed of neutrons and protons. More recent work has shown that protons and neutrons are composed of quarks.

Some of subatomic particles are: electron, positron, electron, electron anti-neutrino, negative muon, muon, muon neutrino, muon anti-neutrino, negative tau, positive tau, tau neutrino, tau anti-neutrino.

(10:61) DESTINY - THE ETERNAL KNOWLEDGE OF ALLAH

Relativity of time clears up a very important matter. The relativity is so variable that a period of time appearing billions of years' duration to us may last only a second in

another dimension. Moreover, an enormous period of time extending from the world's beginning to its end may not even last a second but just an instant in another dimension.

This is the very essence of the concept of destiny- a concept that is not well understood by most people, especially materialists, who deny it completely. Destiny is Allah's perfect knowledge of all events past or future. A majority of people question how Allah can already know events that have not yet been experienced and this leads them to fail in understanding the authenticity of destiny. However, "events not yet experienced" are not yet experienced only for us. Time or space does not bind Allah for He Himself has created them. For this reason, the past, the future, and the present are all the same to Allah; for Him, everything has already taken place and finished.

Lincoln Barnett explains how the Theory of General Relativity leads to this fact in The Universe and Dr. Einstein: According to Barnett, the universe can be "encompassed in its entire majesty only by a cosmic intellect". The will that Barnett calls "the cosmic intellect" is the wisdom and knowledge of Allah, Who prevails over the entire universe. Just as we easily see a ruler's beginning, middle, and end, and all the units in between as a whole, Allah knows the time we are subjected to like a single moment right from its beginning to the end. People experience incidents only when their time comes and they witness the fate Allah has created for them.

It is also important to draw attention to the shallowness of the distorted understanding of destiny prevalent in society. This distorted conviction of fate holds a superstitious belief that Allah has determined a "destiny" for every man but that these destinies can sometimes be changed by people. For instance, for a patient who returns from death's door people make superficial statements like "He defeated his destiny". Yet, no one is able to change his destiny. The person who turns from death's door does not die because he is destined not to die then. It is again the destiny of those people who deceive themselves by saying, "I defeated my destiny" to say so and maintain such a mindset.

Destiny is the eternal knowledge of Allah and for Allah, Who knows time like a single moment and Who prevails over the whole time and space, everything is determined and finished in a destiny. We also understand from what is related in the Qur'an that time is one for Allah: some incidents that appear to happen to us in the future are related in the Qur'an in such a way that they already took place long before. For instance, the verses that describe the account that people are to give to Allah in the hereafter are related as events that already occurred long ago:

"And the trumpet is blown, and all who are in the heavens and all who are in the earth swoon away, save him whom Allah willeth. Then it is blown a second time, and behold them standing waiting! And the earth shineth with the light of her Lord, and the Book is set up, and the prophets and the witnesses are brought, and it is judged between them with truth, and they are not wronged... And those who disbelieve are driven unto hell in troops... And those who disbelieve are driven unto hell in troops..."

(Qur'an, 39:68-74)

As may be seen, occurrences that are going to take place after our death (from our point of view) are related as already experienced and past events in the Qur'an. Allah is not bound by the relative time frame that we are confined in. Allah has willed these

things in timelessness: people have already performed them and all these events have been lived through and ended. It is imparted in the verse below that every event, be it big or small, is within the knowledge of Allah and recorded in a book:

"In whatever business thou mayest be, and whatever portion thou mayest be reciting from the Qur'an,- and whatever deed ye (mankind) may be doing, We are witnesses thereof when ye are deeply engrossed therein. Nor is hidden from thy Lord (so much as) the weight of an atom on the earth or in heaven. And not the least and not the greatest of these things but are recorded in a clear record."

(Qur'an, 10:61)

If one thinks deeper in light of all that is said here, he is sure to realize in his own soul this astounding and extraordinary situation: that all events transpiring on earth are merely an illusion.

(10:92) THE PHARAOH MERNEPTAH

One of the most intriguing predictions made by the Qur'an concerns a Pharaoh of Egypt, called Merneptah, who was the son of Rameses II. According to historical records, this king was drowned in pursuit of Moosa (Alayhis salaam) in the Red sea. When the Qur'an was revealed, the only other mention of Pharaoh was in the Bible, the sole reference to his having drowned being in the Book of Exodus; 'And the waters returned, and covered the Chariots, and the horsemen, and all the host of Pharaoh that came into the Sea after them; there remained not so much as one of them.' (Exodus 14:28)

Amazingly, when this was all the world knew about the drowning of Pharaoh, the Qur'an produced this astounding revelation:

'We shall save you in your body this day, so that you may become a sign to all posterity.'

(Qur'an 10:92)

How extraordinary this verse must have appeared when it was revealed? At that time no one knew that the Pharaoh's body was really intact, and it was nearly 1,400 years before this fact came to light. It was a Professor Loret who, in 1898, was the first person to find the mummified remains of the Pharaoh who lived in the days of Moosa (Alayhis salaam).

For 3,000 years, the corpse had remained wrapped in a sheet in the Tomb of the Necropolis at Thebes where Loret had found it and subjected it to proper scientific examination. In 1912 he published a book, entitled 'The Royal Mummies.' His research has proved that the mummy discovered by Loret was indeed that of the Pharaoh who knew Moosa, resisted his pleas, pursued him as he took flight, lost his life in the process. His earthly remains were saved by the will of God from destruction to become a sign to

man, as is written in the Qur'an. In 1975, Dr. Bucaille, made a detailed examination of the Pharaoh's mummy which by then had been taken to Cairo. His findings led him to write in astonishment and acclaim:

'Those who seek among modern data for proof of the Holy Scriptures will find a magnificent illustration of the verses of the Qur'an dealing with the Pharaoh's body by visiting the Royal Mummies Room of the Egyptian Museum, Cairo.'

As early as the seventh century A.D., The Qur'an had asserted that the Pharaoh's body was preserved as a sign for man, but it was only in the 19th century that the body's discovery gave concrete proof of this prediction. What further proof is needed that the Qur'an is the Book of Allah Taala? Certainly there is no book like it, among the works of men.

"And WE brought the children of Israel across the sea; and Pharaoh and his hosts pursued them wrongfully and aggressively, till when the calamity of drowning overtook him, he cried, 'I believe that there is no god but HE in Whom the Children of Israel believe, and I am of those who submit to Him.' What! Now! While thou wast disobedient before this and wast of the mischief-makers. So this day WE will save thee in thy body alone that thou mayest be a Sign to those who come after thee. And surely many of mankind are heedless of Our Signs."

(Qur'an, 10:90-92)

(11:44) MOUNT JUDI - THE ARK'S RESTING-PLACE

"And it was said: O earth! Swallow thy water and, O sky! Be cleared of clouds! And the water was made to subside. And the commandment was fulfilled. And it (the ship) came to rest upon (the mount) Al-Judi and it was said: A far removal for wrongdoing folk!"

(Qur'an, 11:44)

In recent years there have been some renewed attempts to locate the Ark. These attempts will perhaps continue until we have the answers we wish to have. Among the researchers is an American who is obtaining aerial photos of Mt. Ararat from the CIA collection. The Holy Qur'an describes the story of Prophet Noah (peace be on him), his building of the Ark, the people who joined him and the Flood in detail. The water started gushing out from a particular oven, followed by a large number of other springs as well as a heavy downpour from the sky. The following is note 46 to the verse 44 of Surah Hud 11 in A. A. Maududi's text, "Towards Understanding the Qur'an", vol. IV, pp. 102-4. Page 103 has the map of the Land of Noah's people and Mount Judi.

Mount Judi is situated to the northeast of the Island of Ibn 'Umar in Kurdistan. According to the Bible, the Ark's resting place was Ararat, which is the name of a particular mountain as well as of a whole range of mountains in Armenia. Ararat, in the sense of a mountain range, extends from the Armenian plateau to southern Kurdistan. The mount called Judi is part of this range and is known even today by the same name. In ancient historical accounts, Mount Judi is mentioned as the place where the Ark rested.

Around 250 BC, a Babylonian priest, Berasus, wrote a history of his country based on Chaldean traditions. He mentions Judi as the resting-place of Noah's Ark. The history written by Abydenus, a disciple of Aristotle, also corroborates this. Abydenus further remarks that many people in Mesopotamia possessed pieces of the Ark, which they used as a charm. They ground those pieces in water and gave the preparation to the sick so as to cure them of their ailments.

In connection with this great incident one is also faced with the question of whether the Flood was universal or whether it was limited to the area inhabited by the people of Noah. This question remains unanswered to this day. Under the influence of Israelite traditions, it is believed that it was a universal Flood (Genesis 7: 18-24).

The Qur'an, however, does not explicitly say so. There are several allusions in the Qur'an which indicate that subsequent generations of mankind are the descendants of those who were saved from the Flood. But that does not necessarily mean that the Flood covered the whole world. For, it is quite plausible that at that point in history the human population was confined only to the area which was overtaken by the Flood and that those born after the Flood gradually dispersed to other parts of the world. Two things support this view. Firstly, ancient historical traditions, archaeological discoveries and geological data provide evidence that a great flood took place at some period in the distant past in the Tigris-Euphrates region.

There is no such evidence for a universal flood. Secondly, traditions about a great flood have been popular among all communities of the world down the ages. Such traditions are found even in the folklore of such distant regions as Australia, America and New Guinea. One may thus conclude that at some time in the past the ancestors of all these communities lived together in some region which did the Flood overtake. Since presumably their descendants subsequently dispersed to, and settled down in, different parts of the world, they transmitted and preserved the traditions of this great Flood.

(12:4) THE ELEVEN PLANETS

Consisting of the Sun, a family of **nine known planets**, sixty seven (67) satellites (moons) of the planets, millions of asteroids, and billions of comets, our Solar System is an oasis of light, heat, and life.

The **inner** solar system contains the Sun, Mercury, Venus, Earth and Mars.

The planets of the **outer** solar system are Jupiter, Saturn, Uranus, Neptune, and Pluto.

"When Joseph said unto his father: O my father! Lo! I saw in a dream eleven planets and the sun and the moon, I saw them prostrating themselves unto me."

(Qur'an, 12:4)

What about the Tenth Planet and Eleventh Planet?

Astronomers may have found hints of a massive, distant, still unseen object at the edge of the solar system - perhaps a 10th planet, perhaps a failed companion star - that

appears to be shoving comets toward the inner solar system from an orbit 3 trillion miles away.

Two teams of scientists - one in England, one at University of Louisiana at Lafayette - independently report this conclusion based on the highly elliptical orbits of so-called "long-period comets" that originate from an icy cloud of debris far, far beyond Pluto.

As the planet - estimated to have a mass between one and 10 Jupiter's - orbits, its gravitational wake disturbs the icy debris of the outer solar system, causing some of it to plunge toward the sun as comets.

No one has yet directly observed a 10th planet, and there could still be another cause for the cluster of comets.

What's surprising is just how far out there this supposed planet is. Both Murray and the University of Louisiana physicists put the planet in an orbit about 3 trillion miles - or half a light-year - from the sun. The nearest star is four light -years away.

To put this distance in perspective, consider a miniaturized version of the solar system in which Earth is one inch from the sun. On this scale, Pluto, the ninth planet would be a bit more than a yard from the sun. The new planet, by contrast, would be a half - mile distant.

At that great distance, the 10th planet would be too dim to see by current telescopes, although there is some hope that if it exists, the next generation of space-based infrared telescopes might be able to pick it up.

(13:2)WHAT HOLDS UP THE SKY?

GRAVITATIONAL FORCES

Gravitation is a universal force of attraction acting between all matter. It is by far the weakest known force in nature and thus plays no role in determining the internal properties of everyday matter. Due to its long reach and universality, however, gravity shapes the structure and evolution of stars, galaxies, and the entire universe. The trajectories of bodies in the solar system are determined by the laws of gravity, while on Earth all bodies have a weight, or downward force of gravity, proportional to their mass, which the Earth's mass exerts on them. Gravity is measured by the acceleration that it gives to freely falling objects. At the Earth's surface, the acceleration of gravity is about 9.8 meters per second. Thus, for every second an object is in free fall, its speed increases by about 9.8 meters per second.

Today scientists speak of gravitational forces that hold the heavenly bodies apart from each other and prevent them from colliding with each other. How was this to be conveyed to the first readers of the Qur'an? God tells us in the Qur'an that He is the One Who raised the sky (Qur'an, 55:7) and that he holds it back from falling on the earth (Qur'an 22:65). But how exactly does God do this?

If the author of the Qur'an was a human being, it would have been very easy for the author to copy the answer to this question from the Bible. But today no one will believe that answer.

In the New American Bible, a picture is drawn to show how the authors of the Bible imagined the world to look like. In that picture, the sky "resembles an overturned bowl and is supported by columns" (The New American Bible, St. Joseph's Medium Size Edition, pp. 4-5). The earth in that picture is flat, and is also supported by pillars. After describing the picture at length, the editors of that Bible conclude by calling that idea of the world a "prescientific concept of the universe."
At the time when the Qur'an was being revealed, anyone could have easily believed this description which was already found in the Bible. It is only in modern times that people would know better. How did the author of the Qur'an avoid this mistake?

God says in the Qur'an that He created the heavens:

"Without any pillars that you can see." **(Qur'an, 31:10)**.

Again, the Qur'an says:

"God is the One Who raised the heavens without any pillars that you can see"

(Qur'an, 13:2)

These two verses refute the belief that the vault of the heavens was held up by pillars, the only things preventing the former from crushing the earth. To be able to avoid that prescientific error, the author of the Qur'an must have been either a modern scientist, or God Himself.

On the surface of the Earth the gravity of the Earth pulls downwards on all masses giving the sensation of weight. On the surface of the Moon this pull, or weight, is only one sixth of that on the Earth, and so weight depends on where you are, whereas mass is an intrinsic property of all objects.

In the 17th century Isaac Newton described gravity by saying that each mass attracts every other mass in the Universe with a force, that depends on how much material is present and how far away it is. So, gravity is a universal attractive force that causes objects to 'fall' in the broadest sense, and tries to pull objects like stars and galaxies together. It is bound to succeed unless some other force opposes it.

(13:41) OBLATE EARTH

"Do they not see that WE are visiting the land, reducing it from its outlying boarders? And ALLAH judges; there is none to reverse HIS judgment. And HE is Swift at reckoning."

(Qur'an, 13:41)

Actually, the earth is not a perfect sphere. In fact, it is an oblate spheroid; a somewhat distorted sphere. Because the planet rotates so rapidly on its axis, the strain causes the earth to bulge at the equator and be flattened at the poles.

However, recently there has been information through manmade satellites that the earth is slightly pear-shaped; the northern hemisphere is not as round as the southern hemisphere.

For several hundred years almost everyone has accepted the fact that the world is round. Most persons think of it as a sphere, somewhat like a solid ball. Actually, the Earth is nearly, but not exactly, spherical. It has a slight bulge around the equator. Measured at sea level, the diameter of the Earth around the equator is (12,756.3 kilometers).

The distance from the North to the South Pole, also measured at sea level, is (12,713.6 kilometers). Compared to overall diameter, the difference seems small—only (42.7 kilometers). But compared to the height of the Earth's surface features, it is large. For example, the tallest mountain, Mount Everest, juts less than 6 miles (9 kilometers) above sea level. The Earth's shape has another slight distortion. It seems slightly thicker around the southern hemisphere than around the northern hemisphere. This difference is, at most, about (30 meters).

The shape of the Earth was originally calculated from measurements made by surveyors who worked their way mile by mile across the continents. Today, artificial satellites provide a much more accurate and complete measuring tool. Mathematicians carefully measure the orbits of artificial satellites, then calculate the gravitational force that the Earth exerts on the satellites. From these calculations, they can deduce the shape of the Earth. The slight bulge around the Southern Hemisphere was discovered from calculations made in this way.

(15:28,29) THE IMMORTAL SOUL

"And (remember) when thy Lord said unto the angels; Lo! I am creating a mortal *out of potter's clay of black mud altered; So when I have made him and have breathed unto him of My spirit, do ye fall down, prostrating yourselves unto him."*

(Qur'an, 15:28-29)

"Verily We created man from a product of wet earth. Then placed him as a drop (of seed) in a safe lodging. Then fashioned We the drop a clot, then fashioned We the clot a little lump, then clothed the bones with flesh and then produced it as another creation. So blessed be Allah, the best of the Creators."

(Qur'an, 23:12-14)

In other words the angels prostrated or submitted to the Soul and not to the body. This new creation, that is, Human Soul because of having the attributes of the Soul of the Creator becomes aware of the spiritual attraction of the Creator and establishes itself as a Self-conscious Entity distinct from its mortal organism raised up of the earthen substance.

The fact that the Human Self transcends the laws of nature establishes that the self remains untouched by the processes of decay and decomposition, which culminate in

the dissolution of the body. The Self, therefore, survives death as it had survived many changes the physical body passes through during its life. The usual objections to survival after death are based on the fact of physical decomposition. The Holy Qur'an points out that this is not applicable to the Self:

"And they say: What! When we shall have become bones and decayed particles, shall we, forsooth, be raised up as a new creation? Say: Be ye stones or iron. Or some created thing that is yet greater in your thought! Then they say: Who shall bring us back (to life)? Say: He Who created you at the first. Then will they shake their heads at thee, and say: When will it be? Say: It will perhaps be soon."

(Qur'an, 17:49-51)

(16:6) THE CIRCULATION OF BLOOD

"And surely in the cattle, there is a lesson for you. We give you to drink of what is inside their bodies, from between digested food and blood, pure milk, pleasant to those who drink it."

(Qur'an, 16:6)

The above verse of the Koran calls our attention to the food distribution function of blood. It should be kept in mind however that a Muslim scientist formally discovered the circulation of blood 600 years after Muhammed's death and made known to the west by William Harvey, 1000 years after Muhammed had died.

If Muhammed was the author of the Koran how would he have known, at the time that he lived that digested food is transported via blood and then becomes the constituent of milk secreted by the mammary glands?

(16:8) THE ONGOING PROCESS OF CREATION

...And He creates other things beyond your knowledge... **(Qur'an, 16:8)**
...Allah creates what He wills... **(Qur'an, 24:45)**

These two verses, among others, indicate that Allah has not 'finished' creation; rather, it is an ongoing process. This is very significant from a scientific point of view because we are gradually beginning to observe and understand certain natural phenomena which are still in a process of formation. One prime example is our observation of still- emerging galaxies from huge clouds of nebulae. Another is the evolution of species, with its associated evidence of strange and exotic "intermediate" life forms turned into fossils. These two examples are just the tip of the iceberg; the

following excerpt from the physicist Paul Davies' book The Cosmic Blueprint underscores the growing awareness of continuous creation:

"An increasing number of scientists and writers have come to realize that the ability of the physical world to organize itself constitutes a fundamental, and deeply mysterious, property of the universe. The fact that nature has creative power, and is able to produce a progressively richer variety of complex forms and structures, challenges the very foundation of contemporary science. 'The greatest riddle of cosmology,' writes Karl Popper, the well-known philosopher, 'may well be...that the universe is, in a sense, creative.'

(16:12) THE ORGANIZATION OF THE UNIVERSE

What the Qur'an mentions about the organization of the Universe is important because these references constitute a new fact of divine Revelation. The Qur'an deals with this matter in depth although this is not dealt with in the previous scriptures.

Important fact that the Qur'an does not contain the theories prevalent at the time of the Revelation that deal with the organization of the celestial world. If the Qur'an was authored by any human being, he or she would have naturally included the ideas prevalent at the time. But many of those ideas were later shown to be inaccurate. How did the author of the Qur'an know enough to exclude those ideas, unless the author is God himself.

Those who say that Muhammad authored the Qur'an think that the Arabs were very knowledgeable in the field of Science, and Muhammad was of course one of them. But this explanation is based on the incorrect assumption that the Arabs knew Science before the Qur'an was revealed. The fact is that Science in Islamic countries came after the Qur'an, not before. In any case the scientific knowledge of that great period would not have been sufficient for a human being to write some of the verses to be found in the Qur'an. Modern astronomers are aware that the stars and planets are kept within ranges of precise distances from each other. Had it not been for this fact, collision between them would be inevitable. The author of the Qur'an was also aware of this. In the Qur'an we read

"The sun and the moon (are subjected) to calculations." **(Qur'an, 55:5)**

Again, we read:

"For you (God) subjected the sun and the moon, both diligently pursuing their courses."

(Qur'an, 14:33)

The phrase 'diligently pursuing their courses' is a translation of the Arabic term *daa'ib* which here means 'to apply oneself to something with care in a perseverant, invariable manner, in accordance with set habits and that indeed is how the sun and moon behave.

Another verse in the Qur'an says,

"The stars are in subjection to His command." **(Qur'an, 16:12)**

Order in the universe is essential for its preservation. God, who subjected them to that order knew about it before any scientist.

(16:15) THE MOUNTAINS AS PEGS

The fundamental difference between continental mountains and the oceanic mountains lies in its material. Sediments make Continental mountains essentially, whereas the oceanic mountains are made of volcanic rocks. Compression forces formed Continental Mountains, whereas extensional forces formed the oceanic mountains. But the common denominator on both mountains is that they have roots to support the mountains. In the case of continental mountains, light-low density material from the mountain is extended down into the earth as a root. In the case of oceanic mountains, there is a so light material supporting the mountain as a root, but in the case of oceanic mountain this material is not light because the composition is light, but it is hot, therefore expanded somewhat. But from the viewpoint of densities, they are doing the same job of supporting the mountains. Therefore, the function of the roots is to support the mountains according to the law of Archimedes.

All mountains whether they are on land or in the sea are in the shape of a wedge. Could anyone during the time of Prophet Muhammad (sallallahu 'alaihi wa sallam) have known of the shape of these mountains? Could anyone imagine that the solid massive mountain that he sees before him actually extends deep into the earth and has a root as scientists assure? A large number of geography books when discussing mountains, only describe that part which is on the surface of the earth. This is because they are not written by specialists in geology, but modern science informs us about it and Allah says in the Qur'an:

"And the mountains as pegs." **(Qur'an, 78:7)**

The Earth Mountains play an important role in stabilizing the crust of the earth. This is exactly how the Qur'an described mountains 14 centuries ago.
Allah said:

"And the mountains Has He firmly fixed." **(Qur'an, 79:32)**

And He said:

"And the mountains as pegs." **(Qur'an, 78:7)**

And said:

"And he has set up on the earth mountains standing firm, lest it should shake with you."

(Qur'an 16:15)

Scientists cannot attribute the knowledge revealed to Prophet Muhammad (sallallahu 'alaihi wa sallam) by Allah and contained in the Qur'an to human beings or to any scientific authority in our times, because all scientists were unaware of all these secrets. Moreover, all the humanity could not have any explanation but to attribute that knowledge to some extra-terrestrial force.

(16:66) SCIENTIFIC SIGNS IN THE QUR'AN ABOUT THE CHEMICAL STRUCTURE OF MILK

Full cream milk contains vitamins, minerals, proteins and fats. The most important elements that milk misses are iron and vitamin C. The opaque color that characterizes the milk is mainly due to its protein and calcium content. The Qur'an refers to the production of milk as Allah says:

"And Lo! in the cattle there is a lesson for you. We give you to drink of that which is in their bellies, from betwixt the refuse and the blood, pure milk platable to the drinkers."

(Qur'an, 16:66)

The word "refuse" is used here meaning the intestine specially those parts that absorb the metabolites of the food, as well as being used as the contents of the intestine.

The organs that produce the milk:

The udder (or female breast) is considered as a big gland that has external secretion. Eventhough the glands of the breast produce the milk, many of its components are taken from the blood and other tissues of the body especially the intestine.

Chemical structure of milk:

The milk components which are extracted from the blood, and those manufactured in the intestine (i.e. outside the udder or the breast), are shown here in brief:

1. Water: The glands of the breast extract all the water of the milk from the blood.

2. Milk sugar: Milk sugar is manufactured in the gland of the breast from glucose which is supplied by the blood. Blood glucose which is the source of milk sugar is actually one of the components of the intestine before it is absorbed. Therefore, milk sugar is derived from blood and refuse.

3. Proteins: There are several types of protein in milk, but the essential amino acids which form these proteins, must be supplied by food or formed by bacteria in the intestine, and are transferred through the blood to the gland of the breast. In other words, refuse and blood are the sources of milk proteins.

4. Fats: Constituents of milk fat (Glycerol and fatty acids) are taken from both blood and refuse (directly or indirectly). Fatty acids are taken from the blood fats (or tissues) after its **Hydrolysis** in the gland of the breast.

5. Minerals: Concerning minerals, refuse is the source of calcium and phosphorus present in the bones, so much so that the phosphorus of milk protein **(Casein P)** comes from the blood.

6. Vitamins: With the exception of vitamin B12, all other vitamins are present in milk in different ratios, some are high and others are low. Some of these vitamins are taken from the food, and others are produced by bacteria present in the intestine.

Scientific signs in the verses that mention the formation of milk:

It is obvious from the aforementioned factors that most of the components of the milk come from refuse, or blood, or both. The gland of the breast makes some other components from simple material which were previously taken from blood or refuse or both. The Qur'an uses the word "pure" meaning strained. The components of the refuse and milk are strained from unnecessary components to form pure milk. Regarding the word "Palatable", it signifies the good and sweet taste due to the presence of Lactose (milk sugar).

(16:68,69) THE HONEY BEE

"And your Lord taught the honey bee...."

"And your Lord taught the honey bee to build its cells in hills, on trees, and in (men's) habitations; Then to eat of all the produce (of the earth), and find with skill the spacious paths of its Lord: there issues from within their bodies a drink of varying colors, wherein is healing for men: verily in this is a Sign for those who give thought."

(Qur'an, 16:68-69)

It is generally known that honey is a fundamental food source for the human body, whereas only a few people are aware of the extraordinary features of its producer, the honeybee.

As known, food source of bees is nectar, which is not possible to be found during winter. For this reason, they combine the nectar collected in summer time with special secretions of their body, produce a new food substance, which is honey, and store it for the coming winter months.

It is noteworthy that the amount of honey stored by the bees is much more than their actual need. The question which comes to the mind is why this "excessive production", which seems to be a waste of time and energy is not stopped? The answer to this question is hidden in the verse which states that the bee is "taught" so by the Lord.

Bees innately produce honey not only for themselves but also for the human beings. As a matter of fact, bees, like many other beings in nature, are offered to the service of man. Just like the chicken laying at least one egg a day although it does not need it, or the cow producing much more milk than its offspring needs.

EXCELLENT ORGANIZATION WITHIN THE HIVE

The lives of bees in the hive and their honey production have very interesting contents.

Regulation of humidity and ventilation: Humidity of the hive, which gives honey its protective quality, must be kept within a certain limit. If humidity is over or under a normal limit, then the honey will get spoiled and loose its protective and nutritious qualities. Similarly, temperature in the hive has to be 32^0 C for 10 months of the year. In

order to keep the temperature and humidity in the hive within certain limits, a special "ventilation group" is appointed.

In a hot day, bees are easily observed ventilating the hive. The entrance of the hive fills with bees and by clamping on the wooden ground, they fan the hive using their wings. In a standard hive, air entering from one side is forced to leave from the other side. Extra ventilator bees in the hive work for pushing the air to all corners of the hive.

The ventilation system is also useful in protecting the hive from smoke and air pollution.

Health system: The effort of the bees to preserve the quality of the honey is not limited with humidity and heat regulation. A perfect health system in force within the hive also keeps under control all events that may result in the origination of bacteria. The main purpose of this system is removing all substances subject to cause bacteria production. The basic principle of this health system is to prevent foreign substances from entering the hive. To secure this, always two guardians are kept at the entrance of the hive. If a foreign substance or insect enters the hive despite this precaution, all bees take action to remove it out from the hive.

For the bigger foreign objects that can not be removed from the hive, another protection mechanism is started. Bees produce a substance called "propolis (bee resin)" for these kinds of situations. They produce it by adding some special secretions to the resins they collect from trees like pine, poplar and acacia. Propolis is a special substance in which no bacteria can survive. The bigger foreign objects in the hive are enveloped with a 1.5 mm thick propolis, and are thus isolated from the hive.

The same bee resin is used to patch the cracks in the hive. After being applied on the cracks by the bees, the resin reacts with air and forms a hard surface drying in a very short time.

It is quite obvious that the system employed by the bees for the protection of the hive requires great consciousness and intelligence. What is more interesting is the special feature of the propolis, secreted by protection purposes by the bees, not letting any bacteria survive in it. Even though we assume that bees secrete this substance "consciously" to cover foreign substances, how can we explain that bees give an antibacterial quality to this secretion? Can you - who have a more developed intelligence than the bee - give antibacterial quality to any secretions of your body?

MAXIMUM STORAGE WITH MINIMUM MATERIAL

By shaping small beeswax, honeybees construct a hive where 30.000 bees can live and work together.

The hive is made up of beeswax-walled honeycombs, which have hundreds of tiny cells on each of its faces. All honeycomb cells are exactly at the same size. This engineering miracle is achieved by the collective functioning of thousands of bees. Bees use these cells for food storage and maintenance of the young bees.

Bees have been using the hexagonal structure for the construction of the honeycombs for millions of years. (There is a bee fossil is found dating 100 million years.) It is a wonder why they have chosen the hexagonal structure rather than octagonal, or pentagonal? The answer is given by the mathematicians: "hexagonal structure is the most suitable geometric form for maximum use of unit area" If the honeycomb cells were constructed in another form, then there would be areas left out of use; thus less honey would be stored, and less bees would be able to benefit from it.

As long as their depths are the same, a triangle or quadrangle cell would hold the same amount of honey as a hexagonal cell. But, among all these geometric forms, hexagon is the one with the shortest circumference. Whilst they have the same volume, amount of wax required for hexagonal cells is less than that required for a triangular or quadrangular one.

So, the conclusion is: Hexagonal cell requires minimum amount of wax for construction while it stores maximum amount of honey. Bees themselves can surely not have calculated this result, obtained after many complex geometrical calculations. These tiny animals use the hexagon form innately, just because they are “taught” and inspired so by their Lord.

The hexagonal design of the cells is practical in many aspects. Cells fit to each other and they share each other’s walls. This, again, ensures maximum storage with minimum wax. Although the walls of the cells are rather thin, they are strong enough to sustain a few times of their own weight.

Besides the sidewalls, the same principle of maximum saving is considered also while the bottom edges are constructed.

Combs are built as a slice with two lines lying back to back, where the connection point problem occurs. Constructing the bottom surfaces of cells by combining three equilateral quadrangles solves this problem. When three cells are built on one face of the comb, the bottom surface of one cell on the other face is automatically constructed.

As the bottom surface is composed of equilateral quadrangle wax plaques, the depth increases in these cells, which results in an increase in the volume and thus in the amount of honey to be stored.

OTHER CHARACTERISTICS OF HONEY COMB CELLS

Another point that bees consider during the construction of the honeycomb is the inclination of cells. By rising cells 13 in both sides, they prevent the cells from being parallel to ground. Thus, honey does not leak out from the mouth of the cell.

While working, worker bees hang onto each other in circles and get together in bunches. By doing this, they aim to provide the necessary temperature for wax production. Little sacks in their abdomen produce a transparent liquid, which leaks out and hardens the thin wax layers. Bees collect the wax with the little hooks on their legs. They put this wax into their mouth, chew and process it till it softens enough and shape it in the cells. Many bees work together to ensure the required temperature for the working place in order to keep the wax soft and processable.

There is another interesting point to note in the construction of the honeycomb: The construction of the honeycomb is started from the upper side of the hive and continued simultaneously in two or three separate rows downward. While a honeycomb slice expands in two opposite directions, first the bottom of its two rows join. This process is realized in an astonishing harmony and order. Therefore, it is never possible to understand that the honeycomb actually consists of three separate parts. The honeycomb slices started simultaneously from different directions are so perfectly arranged that, although there are hundreds of different angles in its structure it seem like one uniform piece.

For such a construction, bees need to calculate the distances between the starting and connection points in advance and then design the dimensions of the cells accordingly. How such a delicate calculation can be done by thousands of bees have always impressed scientists.

It is obviously irrational to assume that bees arrange this task, which man can hardly overcome. There is such a delicate and detailed organization in force that it is impossible for them to carry it outs on their own.

So how do they achieve this then? An evolutionist would explain this event to be achieved by "instinct". But what is this "instinct" that can address to thousands of bees at the same time and make them perform a collective task? The point is that it would not be sufficient even if each bee acted as per its own "instinct"; since what he or she does must necessarily be in concordance with each other.

Due to this reason, they must be directed by an "instinct" coming from a unique source. The bees, who start constructing the hive from different corners and then combining their separate works without leaving any gaps and having all the cells constructed equally in the perfect hexagonal structure, must certainly be receiving "'instinctive" messages from the very same source!

The term "instinct" used above is in fact nothing more than a 'futile name' just like mentioned in the Qur'an, the 40th verse of Surah Joseph. It is of no use to insist on such 'futile names' in order to conceal clear truths. Bees are guided from a unique source and thus they come to successfully perform tasks which otherwise they would not be able to. And it is not those namely 'instincts' that lead bees to that; but the 'teaching' mentioned in Chapter An-nahl of the Qur'an. What these tiny animals do is to implement the program that Allah has particularly given to them.

"And in the creation of yourselves and the fact that animals are scattered (through the earth), are Signs for those of assured Faith."

(Qur'an, 45:4)

HOW THEY DETERMINE THEIR DIRECTION

Bees usually have to fly long distances and trace large areas to find food. They collect flower dust and honey constituent within a range of 800 m from their hive. The bee that finds the flowers flies back to the hive to inform others about their place. But, how will this bee describe the place of the flowers to its friends in the hive? By dancing! The bee returning to the hive starts to make some sort of a dance. This dance is a means of expression used to tell other bees the location of the flowers. This dance repeated many times by the bee, includes all the information about the inclination, direction, distance and other details of the food source that enable other bees to reach it.

This dance is actually an "8" figure constantly repeated by the bee. The bee forms the middle part of the figure "8" by shaking its tail and making zig zags. The angle between the zig zags and the line between the sun and the hive, give the exact direction of the food source.

However, knowing only the direction of the food source is not enough. Worker bees should also "know" how far they have to travel to collect honey constituent So, the bee returning from the flower source, "tells" other bees the distance of the flower pollens by certain body movements. It does this by shaking the bottom part of its body and causing air currents. For example; in order to "describe" a distance of 250 m, it shakes the bottom part of its body 5 times in half a minute. This way, the exact place of the source is made clear with the details given about distance and angle.

If the journey from the hive to the food source takes a long time, then there is another problem facing the bee, who can only describe the food source according to the sun. In the bee's journey back to the hive, the sun moves 1 degree every four minutes.

Eventually, the bee will make an error of 1 degree about the direction of the food source it informs to its friends for each four minutes it spends on the way.

The bee's eye is formed of hundreds of tiny hexagonal lenses. Each lens focuses on a very narrow area just like a telescope. A bee looking towards the sun at a certain time of day can always find its location while it flies. The bee is estimated to be doing this calculation by making use of the change in the daylight given out by the sun depending on the time of the day. As a result, while flying in daylight, the bee determines the direction of the target by making corrections in the information on the direction of the food source which it is to give in the hive.

METHOD OF MARKING FLOWERS

When a flower is visited, a honeybee can understand if the nectar of that flower has previously been consumed by another bee, and leaves the flower immediately. This way, it saves both time and energy. Well, how does the bee understand, without checking the flower, that the nectar is consumed?

This is made possible thanks to the bees that have visited the flower earlier and marked it by leaving a drop with a special scent. Whenever a new bee looks in on the same flower, it realizes the scent, understands that the flower if of no use and goes on flying directly towards another flower. Thus, bees are not allowed to waste time on the same flower.

"Then to eat of all the produce (of the earth), and find with skill the spacious paths of its Lord: there issues from within their bodies a drink of varying colors, wherein is healing for men: verily in this is a Sign for those who give thought."

(Qur'an, 16:69)

"And He has subjected to you, as from Him, all that are in the heavens and on earth: Behold, in that are Signs indeed for those who reflect."

(Qur'an, 45:13)

HONEY BEES AND
THE ARCHITECTURAL WONDERS OF HONEY COMBS

Bees produce more honey than they actually need and store it in honeycombs. The hexagonal structure of the honeycomb is well known to everyone. Have you ever wondered why bees construct hexagonal honeycombs rather than octagonal, or pentagonal?

Mathematicians looking for answer to this question reached an interesting conclusion: "A hexagon is the most appropriate geometric form for the maximum use of a given area."

A hexagonal cell requires the minimum amount of wax for construction while it stores the maximum amount of honey. So the bee uses the most appropriate form possible.

The method used in the construction of the honeycomb is also very amazing: bees start the construction of the hive from two-three different places and weave the honeycomb simultaneously in two-three strings. Though they start from different places, the bees, great in number, construct identical hexagons and then weave the honeycomb by combining these together and meeting in the middle. The junction points

of the hexagons are assembled so deftly that there is no sign of their being subsequently combined.

In the face of this extraordinary performance, we, for sure, have to admit the existences of a superior will that ordains these creatures. Evolutionists want to explain away this achievement with the concept of "instinct" and try to present it as a simple attribute of the bee. However, if there is an instinct at work, if this rules over all bees and provides that all bees work in harmony though uninformed of one another, then it means that there is an exalted Wisdom that rules over all these tiny creatures.

To put it more explicitly, Allah, the creator of these tiny creatures, "inspires" them with what they have to do. This fact was declared in the Qur'an fourteen centuries ago:

"And your Sustainer has inspired the honey bee: "Prepare for yourself dwellings in mountains and in trees, and in what (men) build; and then eat of all manner of fruit, and find with skill the spacious paths of your Sustainer". There issues from within their bodies a drink of varying colors, wherein is healing for men: verily in this is a Sign for those who give thought."

(Qur'an, 16:68-69)

For those who are not aware of the Arabic, the astonishing thing about the above verse might not be clear. The Koran talks about the bee that leaves its home in search for food. It uses the female form of the verbs to describe its actions. To the Arab this shows that the bee being talked about is female.

Can you tell the difference between a male and female bee? In fact leave alone Muhammed's time, even today it requires a specialist to differentiate between a male and a female bee. If we claim that Muhammed wrote this then he must have had a keen insight on bees and done statistical tests and samplings on bees to determine in an all inclusive statement that the female bee is the one that gathers the food and the males are incapable of feeding themselves. Normally what would be believed given human culture would be that the male provides and the female stays at home. However this is not the case. Muhammed was not the author of the Koran.

Every man's Encyclopedia under Bees, states: "The drones (males) develop from unfertilized eggs, and take about 24 days to become adults. They are short and stout, don't have a sting and are incapable of feeding themselves. The worker bees (females) have to feed them."

How did Mohammad (pbuh) know about the 20th century scientific fact of the Bee Kingdom? Allah (swt) is telling us that the Bee can produce different food! This is true since the Bee has a unique stomach that capable of producing food (honey) that is different in color and taste. Also, Allah (swt) is referring to the bees in the feminine instead of muscular verbiage as in the Arabic word "Koolie" means eat and "fas-lookie" which means follow the way.

The gender of the Bees is divided into 3 classes. The Queen, the Drones, which are the male Bees and the Workers, which are the female Bees. The workers are the ones who build hives, feed the queen, gather the pollen and the nectar and protect the hives. Allah (swt) was talking to the workers (females) and that's why he used the feminine verbiage. How did Mohammad (pbuh) know about the 3 classes of the Bees?

(16:69) THE MIRACLE OF HONEY

"... There issues from within their bodies a drink of varying colors, wherein is healing for men: verily in this is a Sign for those who give thought."

(Qur'an, 16:69)

Do you know how important a food source the honey, offered to man by Allah by means of a tiny animal, is?

Honey is composed of sugars like glucose and fructose and minerals like magnesium, potassium, calcium, sodium chlorine, sulfur, iron and phosphate. It includes B1, B2, C, B6, B5 and B3 vitamins changing according to the qualities of nectar and pollen sources. Besides; copper, iodine, iron and zinc exist in it in small quantities. Also, several kinds of hormones are also present in its content.

As stated in the Qur'an, honey has a feature of 'healing men.'

Nowadays, an apiculture and bee product has become a new branch of research in countries advanced in science. Other benefits of honey may be described as below:

Easily digested: Because the sugar molecules in the honey can convert into other types of sugar (fructose to glucose), the honey is easily digested by the most sensitive stomachs despite its high acid concentration. It also helps kidneys and intestines to function better.

Has a low calorie level: Another quality of the honey is that, when it is compared with the same amount of sugar, it gives 40% less calories to the body. Although it gives great energy to the body, it does not add on weight.

Rapidly fuses into blood: When accompanied by mild water, honey fuses into the bloodstream in 7 minutes. The free sugar molecules in it make the brain function easier...

Supports blood formation: Honey provides an important part of the energy needed by the body for blood formation. In addition, it helps cleaning the blood. It has some positive effects in regulating the blood circulation and facilitating it. Also, it functions as an important protection against capillary problems and arteriosclerosis.

Does not accommodate bacteria: These bacteria killing property of the honey is named as the "inhibition effect". The experiments conducted on honey resolve that; its bacteria killing property increases twice when diluted with water. It is very interesting to note that the newborns in the bee colony are nourished with diluted honey by the bees responsible of their supervision - as if they know this feature of the honey.

Royal Jelly: Royal jelly is a substance produced by worker bees inside the beehive. Inside this nutritious substance, there exist sugar, proteins, fats and many vitamins. It is used in problems that occur as a result of tissue deficiency or body frailty.

It is obvious that honey, which is produced in much higher amounts than the requirement of the bees, is made for the benefit of man. And it is also obvious that bees cannot perform such an unbelievable task "on their own."

(17:78) THE SUN’S DECLINATION

“Establish regular prayers - at the sun’s decline till the darkness of the night, and the morning prayer and reading: for the prayer and reading in the morning carry their testimony.”

(Qur’an, 17:78)

Declination is the angular distance of the sun north or south of the earth’s equator.

The earth’s equator is tilted 23.45 degrees with respect to the plane of the earth’s orbit around the sun, so at various times during the year, as the earth orbits the sun, declination varies from 23.45 degrees north to 23.45 degrees south.

This gives rise to the seasons. Around December 21, the Northern Hemisphere of the earth is tilted 23.45 degrees away from the sun, which is the winter solstice for the Northern Hemisphere and the summer solstice for the Southern Hemisphere. Around June 21, the Southern Hemisphere is tilted 23.45 degrees away from the sun, which is the summer solstice for the Northern Hemisphere and winter solstice for the Southern Hemisphere. On March 21 and September 21 are the fall and spring equinoxes when the sun is passing directly over the equator. Note that the tropics of cancer and Capricorn mark the maximum declination of the sun in each hemisphere.

Declination is calculated with the following formula:

$d = 23.45 * \sin [360 / 365 * (284 + N)]$

Where:

d = declination

N = day number, January 1 = day 1

(18:25-26) MYSTERIOUS RELATION BETWEEN
Gregorian and Islamic calendar

In a Qur’anic story about a group of believers who have been saved from their enemies by a miraculous long sleep in a cave, God tells us about the duration they spent in the cave to be 300 and some add 9 years more. From the first glance this verse seems vague. Is it 300 years or 309 years? Well, in the paragraphs below we will discover that both numbers of years are correct.

Allah (SWT) says in Sura 18:

“We will show them Our SIGNS in the horizons and in their own souls until it becomes manifest to them that this is the truth.”

(Qur’an, 41:53)

“So they stayed in their Cave three hundred years and (some add) nine more. Say: Allah knows best how long they stayed…”

(Qur’an, 18:25-26)

A month was calculated by ancient peoples as the time between two full moons, or the number of days required for the moon to circle the earth. This measurement is called the lunar month and it is equal to 29 days 12 hours 44 minutes. The Islamic year consists of 12 lunar months. In the year 1582, to be specific, the Italians, French, Portuguese and the Spanish were first to adopt the modern or Gregorian calendar. In this calendar the measurement of a year is based on one revolution of the earth around the sun. The length of the months is approximately one twelfth of a year (28 to 31 days) and is adjusted to fit the 12 months into what is called a seasonal, tropical, or solar year.

The year is the period taken by the Earth to complete an orbit around the Sun and, again, there are a number of ways in which this can be measured. But for calculating a calendar that is to remain in step with the seasons, it is most convenient to use the tropical year, since this refers directly to the Sun's apparent annual motion. The tropical year is defined as the interval between successive passages of the Sun through the vernal equinox (i.e., when it crosses the celestial equator late in March) and amounts to 365.242199 mean solar days.

The tropical year and the synodic month (lunar month) are incommensurable, 12 synodic months amounting to 354.36705 days, almost 11 days shorter than the tropical year.

The Muslim Era is computed from the starting point of the year of the emigration (Hegira); that is, from the year in which Muhammad, the prophet of Islam, emigrated from Mecca to Medina, AD 622. The second caliph, 'Umar I, who reigned 634-644, set the first day of the month Muharram as the beginning of the year; that is, July 16, 622.

The variations among the many calendars in use from ancient to modern times have been caused by the inaccuracy of determinations of the exact duration of the year. The difference between the Gregorian calendar (solar) which was first adopted in the 16th century and the Islamic calendar (lunar) which was adopted in Mohammad's time is 10.87 days per year. This makes the Qur'anic verse mentioned above valid in calendar systems, the one that was followed during Mohammad's times and the one that was adopted 165 years later.

ORBITAL PARAMETERS OF THE MOON AND THE EARTH

Moon:

1.Moon Orbital period (sidereal):
27.3216615 days
Or 27 days 7 hours 43 minutes 11.5 seconds
Or 327.85993 days in a year

2. Average length of lunar day (sinodic):
29.5305883 days
Or 29 days 12 hours 44 minutes 2.8 seconds
Or 354.36705 days in a year

Earth:

1. Earth Rotational period:	23.9345 hours
2. Earth Orbital period (sidereal):	365.25636 days
3. Earth Tropical year (sinodic):	365.242199 days

CALCULATIONS
S (Solar year) = 365.242199 days
L (Lunar year) = 354.36705 days
D (Difference) = S – L = 365.242199 - 354.36705 = 10.875149
S / D = 33.5850294
300 x D = 3262.5447 days
S / L = 1.0306889396
(300 x D) / S = 8.932551356

Nine Solar years (9 x S) = 3287.179791 days
Nine Lunar years (9 x L) = 3189.30345 days

300 Solar years = 109 572.6597 days
300 Lunar years = 106 310.115 days

300 x S – 300 x L = 3262.54 days
309 x S – 309 x L = 3360.42 days

300 x L +9 x S = 10631.115 + 3287.17979 = 109597.28

And finally:
(300 x S) / L = 309.20668188535

Astronomers classify the solar year into star year (365.25636 days) and tropic year (365.242199 days). Astronomers also divide the lunar year into star year (327.85992 days) and tropic year (354.36705 days.

The solar year is 365.242199 days long, while the lunar year is 354.36705. Thus the difference between the two is 10.875149 days. After 33.5850294 solar years the total number of these differences is one solar year, i.e. (365.242199 / 10.875149 = 33.5850294). In other words, the lunar year coincides with the solar year at the same starting point every 33.58 years. We can consider each returning point to be one cycle of 33.58 years. It is noteworthy that the Prophet Muhammad (pbuh) received his first revelation six years after the start of the cycle in 610 and he died in 632 six years before its end, making the period of the message the focal point of the 19th cycle.

300 years x 10.875149 days per year = 3262.5447 days. A solar year contains 365 days, 5 hr, 48 min, and 45.5 sec. (about 365.242199 days). So, 3262.5447 days / 365.24199 days per Solar year = 8.932556 years. In terms of years the above figure is Nine years, which was added to the three hundred years.

"It is He Who made the sun to be a shining glory and the moon to be a light (of beauty) and measured out stages for her: that ye might know the number of years and the count (of time). Nowise did Allah create this but in truth and righteousness. (Thus) doth He explain his Signs in detail for those who understand."n, 10:5)

The length of stay of the People of the Cave as stated in cited *aya* is 309. While the Qur'an does not explicitly state the number of the People of the Cave, it states the length of their stay in the cave, then comments by adding: *"Allah knows best how long they stayed…."* Is this comment intended to highlight the veracity of this number at a time

when there are so many claims and opinions about it? Or is there some other aim? The majority of interpretations take the first view, but is it not possible that the clause "Allah knows best how long they stayed" hints that Allah knows best about the truth of this number 309, its meaning and secrets, and the wisdom behind the period the People of the Cave stayed?!

Many interpreters, past and modern, maintain that 300 solar years are equal to 309 lunar years. This means to them the increase that occurs when you convert 300 solar years into lunar ones:

i.e.: $(365.242199 \times 300) \div 354.36705 = 309.20668$

When we talk the language of years, the fractions amounting to 9 years will be insignificant. These interpretations are possibly what the Qur'anic text suggests.

CONCLUSION

The 300 solar years comprise 109572.6597 days while the 300 lunar years comprise 106310.115 days. This means the difference is 3262.54 days. This number of days is closer to 9 solar years than 9 lunar years. This means that the People of the Cave stayed 300 solar years, i.e. 300 lunar years with 9 solar years added to them. The number 300 stays the same, and the addition comes as a result of the difference between the concepts of solar and lunar year. The addition, then, is 9 solar years.

(18:90) THE OZONE LAYER AND OZONE HOLES

The sun, like any other star, radiates at a wide range of wavelengths. The visible waves, which we call sunlight, are only a portion of that radiation, and that light lies between the ultra-violet and the infrared rays. The sun also radiates at wave lengths longer than what the human eye can see and that is in the infra-red and the radio wave regions, and also in wavelengths shorter than we can see in the ultra-violet, X-ray and Gamma Ray regions.

These short waves (X-ray and Gamma rays) are completely blocked off in the upper layers of the earth's atmosphere, while most of the ultra-violet rays are absorbed in the ozone layer. Only a small amount of ultra-violet rays can penetrate, and these are the rays that cause us sunburn, and in excess, are said to cause skin cancer.

The ozone layer (ozone is a form of oxygen) lies at about 50 kilometers above the earth's surface and works as a natural shield to protect us from harmful sun rays.

The detailed composition of the earth's atmosphere and the discovery of the ozone layer took place many centuries after the Qur'an was revealed, nevertheless, there is mention in the Qur'an about this protective layer that shields us against the sun's harmful rays:

"Until he reached the rising of the sun, he found it rising on a people for whom We had provided no shield against it (the sun)."

(Qur'an, 18:90)

Five implications are drawn from this verse:

1) The word "shield" implies that there is something harmful from the sun, because if there were no harm to come from the sun, there would be no need for a shield.

2) In earlier interpretations of the Qur'an the word "shield" was taken to mean mountains or hills, but mountains and hills do not shield us from the sun's rays ultra violet rays unless we live all our lives inside one!

3) The phrasing of the verse indicates that the people mentioned as having no shield are in fact the exception and that for the rest of mankind there exists a shield.

4) The words "We had provided no shield" indicate that the shield is a natural one (of God's making) and not a man-made one. This automatically eliminates the suggestion of houses and other man-made shelters.

5) The verse indicates the presence of a people, and thus areas, that are not shielded. This is in line with the current knowledge concerning the existence of holes in the ozone layer. It is generally thought that these holes have always existed. The matter has suddenly acquired an alarming nature because the size of these holes is greatly being enlarged as a result of man's pollution of the planet.

The only phenomenon that is able to accommodate all these five implications is the ozone layer.

(18:109) PROGRAMMING INTELLECT

"Your creation and your resurrection [on the last day] is as a single unit [nafs - one substance or essence]."

(Qur'an, 31:28)

Cloning involves the derivation of a group of genetically identical cells or whole organism from a single [Waahid- in the verse above] original cell or organism.

"Say: If the sea were to become ink for the words of my Cherisher (God), indeed the sea would be used up before the words of my Cherisher (God) were exhausted, even though we brought the like of it [i.e. another sea] to its aid."

(Qur'an, 18:109)

A LITERAL TRUTH:

At the moment of conception, when a sperm and ovum (egg) unite, an incredible number of personal features and growth patterns are determined. It is estimated that the genetic information carried in each human cell would fill thousands of 1000- page books- and that's in fine print.

The above Koranic verse is proven true literally if we consider all the cells making up creation. If all the information contained in all the cells were to be written down, surely**:**

"...The Sea would be exhausted before the words of the Cherisher (God) are exhausted."

Consider this: one cell can fill up thousands of 1000- page books and that in fine print!

Each cell has a "program" analogous to a computer program written down , so well organized and regulated so as to function properly, the slightest malfunction leads to deformities and monstrous growths [cancer is the case in point]. Each cell is like a computer, programmed to perform specific functions. It is common knowledge that a computer will only function if it has been programmed. A fact that implies the existence of a programming intellect, that provides the information necessary to operate the system.

The programming intellect, unvarying and uniform in his essence of programming is the One God (Allah in Arabic).

(20:50) CELLS ARE PROGRAMMED

Evolutionists and Neo-Darwinians classify cells as primitive or evolved. This is not true. 99% of cellular structures all across the species are identical. This figure is 100% for DNA. The only difference between cells is the "program" which instructs them on how to function. Therefore, evolutionary theory fails at the very basic cell level.

Every cell is programmed to function in a specific way. Even the ordinary computer user knows that a computer, with all its complex structures, will only function if it has been programmed. A fact that implies the existence of a programming intellect that provides the information required to operate the system. This should surely lead one to consider the role of the Creator in life's existence.

"He [Moses] said [to Pharaoh]: `Our Cherisher (God) is He who gave to everything its creation then DIRECTED it."

(Qur'an, 20:50)

There is a genuine enigma among the community of biologists: The origin of the genetic code and how it increases in information which leads to more and more complex structures. The only valid explanation given the intelligent nature of the messages contained in the DNA is that an intelligent designer was involved. We call him Allah, the God.

(21:30) WATER AND LIFE

In the Qur'an we read:

"Do not the disbelievers see that the heavens and the earth were joined together then we split them asunder, and we created from water every living thing, do they not believe?"

(Qur'an, 21:30)

"And Allah has created every trodding creature from water..."
(Qur'an, 24:45)

"It is He who created from water a human...."
(Qur'an, 25:54)

Water is the most common substance on Earth, covering more than 70% of the planet's surface. All living things consist mostly of water; for example, the human body is about two-thirds water (when thay cremate a human what happens to him? Why? Scientist tell us that all forms of life known to humanity today require three basic conditions: Temperature, the existence of water, and the existence of an atmosphere.

All metabolisms require water to survive, so animals that exist in arid regions have body mechanisms that protect against water loss and make maximum use of water (camels for example). Dehydration in humans results from lack of food, drink, and from sweating, in addition to other factors. This loss eventually affects the proper functioning of the heart, central nervous system, and organs containing smooth muscle. Finally, intercellular water is lost, which upsets vital chemical processes in the cells. If water is not restored to the body, death will usually occur within a few days.

The blood of all living creatures is composed of 55 percent plasma, which in turn is composed of more than 90 percent water. We could go on and on. Again we find ourselves asking the question: How did Muhammad (pbuh) know that all living creatures are created from water centuries before mankind discovered this fact through scientific experimentation? Did he randomly select an element from the countless billions of possible choices? Why did he not claim that mankind was created from air, or from wood, or from light? Why water? The answer is known!

(21:30) THE BIG BANG - AN UNIVERSAL EXPLOSION

The universe came into existence billions of years ago in a tremendous explosion called *"The big bang."* This is mentioned in the Qur'an in the following verses:

'Have not "those who disbelieve " known that heavens and earth were of one piece and We parted them and We made every living thing of water. Will they not then believe?'

(Qur'an, 21:30)

The discovery of "The Big Bang" and of "The aquatic origin of life" was made by the non-Muslims, ("those who disbelieve"). In the beginning all the matter and space (heavens) were at one point (one piece). Then every thing was separated in what the physicists describe as "The big bang." The evidence for "The big bang" is so overwhelming that it is now considered a fact and not a theory.

The Koran gives an accurate visual description of the Big Bang theory of the creation of the universe.

This is exactly how the 'rejecter' scientists envision the creation of the universe, from one piece that was then split by a 'big bang' into many pieces. How do we explain this information in the Koran if it is not what it claims to be the words of an all-knowing creator?

The Big Bang itself resulted from an extremely dense singularity. The creation of the universe is one of matter, space and time that are intimately linked together. Matter and space were joined as one and then were separated in the explosion.

All the evidence available today suggests an explosive origin to the universe that brought both space and time into existence. This is what is referred to as the Big Bang. The theory of the Big Bang which has successfully taken over the place of the 'Steady state' theory was worked out in the 1920's by two scientists quite independently of each other, the Russian meteorologist Alexander Friedmann and the Belgian mathematician Georges Lemaitre.

Why do Most Scientists Accept the Big Bang Theory? The acceptance of this theory by the scientific community is based on a number of observations. These observations confirm specific predictions of the Big Bang theory. We know that scientists test their theories through deduction and falsification. Predictions associated with the Big Bang theory that have been tested by this process are:

If the Big Bang did occur, all of the objects within the Universe should be moving away from each other. In 1929, Edwin Hubble documented that the galaxies in our Universe are indeed moving away from each other.

The Big Bang should have left an "afterglow" from the explosion. In the 1960s, scientists discovered the existence of **cosmic background radiation**, the so-called "afterglow" after the Big Bang explosion. Our most accurate measurements of this cosmic radiation came in November 1989, by the Cosmic Background Explorer (COBE) satellite. The measurements from this satellite tested an important prediction of the **Big Bang** theory. This prediction suggests that the initial explosion that gave birth to the Universe should have created radiation with a spectrum that follows a black body curve. The COBE measurements indicated that the spectrum of the cosmic radiation varied from a black body curve by only 1 %. This level of error is considered insignificant.

If the Universe began with a Big Bang, extreme temperatures should have caused 25 percent of the mass of the Universe to become helium. This is exactly what is observed.

Matter in the Universe should be distributed homogeneously. Astronomical observations from the Hubble Space Telescope do indicate that matter in the Universe generally has a homogeneous distribution.

How will the Universe End? Cosmologists have postulated two endings to the Universe. If the Universe is infinite or has no edge, it should continue to expand forever. A Universe that is finite or closed is theorized to collapse when expansion stops because of gravity. The collapse of the Universe ends when all matter and energy is compressed into the high energy, high-density state from which it began. This scenario is of course called the Big Crunch. Some theorists have suggested that the Big Crunch will produce a new Big Bang and the process of an expanding Universe will begin again. This idea is called the **oscillating Universe theory**.

(21:32) ATMOSPHERIC PROTECTION OF THE EARTH

The Earth's atmosphere, so vital to life on the planet, extends one thousand kilometers into space. The following are some of its numerous functions:

1) The atmosphere acts as a protective shield that absorbs and disperses the continuous shower of meteors that fall into the Earth's gravitational field.

If the atmosphere were thinner than it's present thickness these meteors would find their way to the surface of the earth causing fires and widespread damage. The Qur'an asserts this function:

"And we made the Samaa (sky) a secure ceiling"

(Qur'an, 21:32)

The words "Samaa" and "Samawaat" are used in the Qur'an in different meanings. The word "Samawaat" (skies), which is the plural of "Samaa" (sky) is always used to denote the heavens or the universe as a whole. The word "Samaa" is usually used to denote our immediate sky or the earth's atmosphere.

As an example of the two uses, we read:

a- ***"God created the 'samawat' (heavens) and the earth, truthfully. This provides a sufficient proof for the believers."***

(Qur'an, 29:44)

Here the word "samawat" (plural) means heavens or universes.

b- ***"He (God) sends down from the 'samaa' (sky) water for your drink, and to grow trees for your benefit."***

(Qur'an, 16:10)

Here the word "samaa" (singular) is used to mean our immediate sky.

2) The atmosphere contains the gases necessary for sustaining the life of all animals and plants, namely oxygen and carbon dioxide.

(21:33) THE SPHERICAL EARTH

In his famous treatise, ar-Risalah al-'Arshiyah, Ibn Taymiyah - may Allah be merciful with him - refutes the position of the neo-Platonic philosophers who identified Allah's Throne with the ninth celestial sphere (Majmu'ul-Fatawa, Vol. 6, pp. 546-ff.). In the course of his response, Ibn Taymiyah discusses the question of the earth is it round or flat? Ibn Taymiyah writes:

"[That] celestial bodies are round (istidaaratul-aflaak) - as it is the statement of astronomers and mathematicians (ahlul-hay'ah wal-hisab) - it is [likewise] the statement of the scholars of the Muslims; as Abul-Hasan ibn al-Manaadi, Abu Muhammad ibn Hazm, Abul-Faraj ibn al-Jawzi and others have quoted: that the Muslim scholars are in agreement [that all celestial bodies are round]. Indeed Allah - taala - has said:

"And He (i.e., Allah) it is Who created the night and the day, the sun and the moon. They float, each in a falak."

(Qur'an, 21:33)

Ibn Abbas says: *A falaka like that of a spinning wheel.*

Ibn Taymiyah continues: The [word] falak [in the Arabic language] means that which are round. From which is the statement [of the Arabs]: "The young girl's breasts have ta-fa-la-ka when they become round." (Vol. 6, pp. 566-567)

In an earlier passage (Vol. 6, pp. 565-566), Ibn Taymiyah discusses why those on the other side of the earth are not below us, just like we are not below them. He writes:

"As for the other side of the earth it is surrounded by water. [Admittingly Ibn Taymiyah - as all Muslim scholars of his day - were not aware of the Americas and believed that the Old World was encompassed by an ocean.] There are no human beings or anything like that [on that side]. Even if we were to imagine that people were on that side of the earth, such individuals would still be on the face of the earth. Those on that side of the earth are not below those who are on this side; just like those on this side are not below those on that side. For as all spherical bodies surround a center point (markaz), no one side of a spherical body is under the other, nor is the north pole under the south [Unlike Western maps, Muslim cartographers (map-makers) would draw the world with the south-side up.] or vice versa.

In another passage (Vol. 5, p. 150) Ibn Taymiyah clearly states the earth is spherical.

Significantly Abu Ya'la in his work Tabaqatal-Hanabilah (Biographical Entries of the Hanabali Scholars) quotes the unanimous consensus (ijma) of all Muslim scholars that the earth is round.

This consensus was mentioned by the scholars of the second generation (the students of the Prophet's Companions) and was based upon Ibn Abbas' explanation to 21:33 (previously cited) and other evidences.

The later belief of Muslim scholars, like as-Suyuti (died 911 AH) that the earth is flat represents a deviation from this earlier opinion.

(21:33) ORBITAL MOVEMENT OF CELESTIAL BODIES

When one looks at the endless intricate orbits and mathematical precision in the universe one can only gasp in awe. All the planets that circulate around stars, which in turn revolve round the center of gravity of their own galaxies.

These very accurate balances are mentioned in the following verses:

"The sun and the moon follow courses precisely computed." **(Qur'an, 55:5)**
"And the sky He raised and set the balance." **(Qur'an, 55:7)**

The orbits of the heavenly bodies are mentioned in the verse:

"And the sun and the moon, all traveling in orbits." **(Qur'an, 21:33)**

Note that the last verse said "all" and not 'both' which indicates that the reference to the sun and the moon is symbolic, that is, of all other heavenly bodies that obey the same rules.

THE SUN & MOON AND THEIR ORBITS

Today we know that the Moon revolves around the earth in approximately 29.5 days. The sun also revolves in its own orbit. The position of the sun in our galaxy must be considered, and we must therefore call on modern scientific ideas.

Our galaxy, the Milky Way galaxy, includes one hundred billion stars situated in such a formation that the galaxy is shaped like a disc. This disc turns around its center like a gramophone record. Now, it is obvious that when a gramophone record turns, any point on the disc would move around and come back to its original position. Similarly, every star in the galaxy moves as the galaxy rotates on its axis. Therefore the stars that are away from the center of the galaxy orbit around the axis. The sun is one of those stars.

The detail of the sun's orbit is as follows: To complete one revolution on its own axis, the galaxy and the sun take roughly 250 million years. The sun travels roughly 150 miles per second in the completion of this. The above is the orbital movement of the sun that was already referred to in the Qur'an fourteen centuries ago. And yet this is a new finding. The knowledge of the sun's orbit is an acquisition of modern astronomy.

Two verses in the Qur'an refer to the orbits of the sun and moon. After mentioning the sun and the moon, God says:

"Each one is traveling in an orbit with its own motion."
(Qur'an, 21:33; 36:40)

How did the author of the Qur'an know of this? Even after the Qur'an was revealed, early commentators could not conceive of the orbits of the sun and moon. The tenth century commentator Tabari could not explain this so he said, "It is our duty to keep silent when we do not know." This shows just how incapable men were of understanding this concept of the sun's and moon's orbit. From this it is clear that if the Qur'an was here expressing an idea already known to the people, the commentators would have easily understood it. This confirms what God said to his prophet, on whom be peace:

"This is of the tidings of the Unseen which we inspire in you (Muhammad). Neither you nor your people knew it before this."
(Qur'an, 11:49)

(21:33) THE SUN - ROTATION AND REVOLUTION

The Qur'an also discusses the **sun** and the manner in which it travels through space. Again, a person can guess on that subject. When the sun moves through space, there are two options: it can travel just as a stone would travel if one threw it, or it can move of its own accord. The Qur'an states the latter - that it moves as a result of its own motion (Surah al-Anbiya 21:33). To do such, the Qur'an uses a form of the word *sabaha* to describe the sun's movement through space. In order to properly provide the reader with a comprehensive understanding of the implications of this Arabic verb, the following example is given.

If a man is in water and the verb *sabaha* is applied in reference to his movement, it can be understood that he is swimming, moving of his own accord and not as a result of a direct force applied to him. Thus when this verb is used in reference to the sun's movement through space, it in no way implies that the sun is flying uncontrollably through space as a result of being hurled or the like. It simply means that the sun is turning and rotating as it travels. Now, this is what the Qur'an affirms, but was it an easy thing to discover? Can any common man tell that the sun is turning?

Only in modern times was the equipment made available to project the image of the sun onto a tabletop so that one could look at it without being blinded. And through this process it was discovered that not only are there spots on the sun but that these spots move once every 25 days. This movement is referred to as the rotation of the sun around its axis and conclusively proves that, as the Qur'an stated 1400 years ago, the sun does, indeed, turn as it travels through space.

(21:104) THE BIG CRUNCH - BIG SQUEEZE

The Day when We shall roll up the heavens as a recorder rolleth up a written scroll. As We began the first creation, We shall repeat it. (It is) a promise (binding) upon Us. Lo! We are to perform it.

(Qur'an, 21:104)

"And they esteem not Allah as He hath the right to be esteemed, when the whole earth is His handful on the Day of Resurrection, and the heavens are rolled in His right hand. Glorified is He and High Exalted from all that they ascribe as partner (unto Him)."

(Qur'an, 21:104)

According to modern cosmology, the Universe began about 10 or 15 billion years ago in an event known as the Big Bang. It has been expanding ever since. What we do not know is whether it will go on expanding forever. If the density of matter in the Universe is sufficiently large, gravitational forces will eventually cause the Universe to

stop expanding, and then to start falling back in upon itself. If that happens, the Universe will end in a second cataclysmic event that cosmologists call The Big Crunch.

The Big Crunch Theory is one scenario for the end of the universe. It states that when the universe is about 50,000,000 times its present age, or in $7.5x10^{17}$ (seven hundred fifty quadrillion) years, its expansion will stop. Then, ever so slowly at first, but gaining speed as it goes, the universe will begin to collapse.

After another seven hundred fifty quadrillion years, the universe will become an infinitely small point of infinite density and infinite temperature.

What next? Who knows! The universe may continue to oscillate between Big Bangs and Big Crunches for all eternity. Or, the Big Crunch may be the end of everything. One thing is certain, however. If a new universe were created, it would have no memory of the old one. It could develop without regard for anything that happened before.

(21:104) THE CONTRACTION OF THE UNIVERSE AND TIME REVERSAL

Time is one of the most elusive mysteries of the universe. No one knows what time really is. Albert Einstein said that time is the thing that we measure with the clock. Time passes slowly at high speeds and stops- altogether at the speed of light. Time has a direction, it always moves towards the future. We see rain falling from the sky, objects breaking up, people getting older, and people dying.

We never see a glass getting unbroken or any one coming back from the dead. Physicists like Michael BerTy, Thomas Gold, and Steven Hawking have proposed that time may reverse then the universe starts contracting. Verses in the Qur'an suggest that one day the universe will start contracting and then the Day of Judgment will begin.

"The day when We shall roll up the heavens as a recorder rolls up a written scroll. As We began the first creation, We shall repeat it."

(Qur'an, 21:104)

In the above verse the contraction of the universe is compared to the closing of a scroll. That is when time may reverse. Reversal of time will cause man to rise back from his grave and again become alive. Every event will happen again as every thing, is recorded in time.

"And there is nothing hidden in the heavens or the earth but it is a clear record (in time)."

(Qur'an, 27:75)

As the history of earth runs backwards, nations will return one after another. All the good and evil deeds of the individual as well as the nations will become completely apparent as the time runs backwards.

"And you will see each nation crouching each nation called to its record. (In time). And it will be said to them: This day you are repaid for what you used to do."

(Qur'an, 45:28)

Playing back of time will make people see what they had done before. They will have no control over their hands, feet, mouths, and eyes. They will repeat all the wrong and right things that were done before again. In this sense the hands, feet, etc., will become witness against them in front of all the angels and Allah. They will not be able to deny any of their wrong doings.

"On the day when the their tongues and their hands and their feet testify against them as to what they used to do."

(Qur'an, 24:24)

"We warn you of doom at hand. A day when a man will look on that his own hand has sent before, and disbelievers will cry, "Would that we were dust"

(Qur'an, 78:40)

"Prophets will be returned into their time as time runs backwards) And the messengers are brought into their time appointed."

(Qur'an, 77:11)

(22:5) REVIVAL OF LIFELESS LAND

Allah The Glorified says in the Qur'an:

"And you see the earth barren, but when we send down water (rain) on it, it is stirred (to life), it swells and puts forth every lovely kind (of growth). "

(Qur'an, 22:5)

This verse describes what happens to dry soil when water falls on it, and mentions the three stages it goes through until its plant appears above the soil and gives its fruit. What has modern science said about the stages of germination??

Scientific signs concerning plant germination.

First: Agitation of the soil

What is meant by agitation, is the movement of soil particles and not the movement of the earth's crust in one bulk as in the case of earthquakes. These particles are composed of joint layers of silica and alumina. Each layer is on top of the other. When water penetrates the layers, it causes the swelling of mud particles. So, the descending of

water (rain) on the soil in sufficient amount would cause the agitation of its particles. This could be explained as follows:

a. The electrostatic charge on the surface of the particle (which appears after the descent of water) would cause its instability, and agitative movements that would not be stabilized except after neutralizing this charge with an opposing one. Here we can clearly perceive the Divine wisdom in creating all creatures in pairs which calls for its stability and tranquillity.

b. Moving and agitation of the soil particles is also due to its collision with water particles. The movement of water particles has no specific direction, so the soil particles shake and move from their place as they are struck from all sides. The Botanist Robert Brown (1828) noticed these movements of the soil particles and called them Brownian movement. Whenever water is abundant this would increase the distance between the soil particles and facilitate their movement. If water decreases, they get closer and slow down their movement until they stop. So this movement is due to the direct action of the water on the soil particles.

Second: Swelling stage

What is meant by this term, is the soil particles become swollen and increase in thickness. Consequently the size of the soil increases due to the increase in size of its particles. We mentioned earlier that soil particles are composed of joint layers. Between any two layers there are spaces, that would allow water particles and dissolved ions to enter. When water and the nourishing elements dissolved in it, diffuses between the layers, this would result in the swelling of the size of the soil particles. This is analogous with the swelling of mud (in a lab experiment) when a certain amount of water is poured on it, it swells due to absorption of water. Here we have another procedure happening which is keeping water from leaking down due to the action of gravity, because the particles carry the water between them in layers and thus it has the ability to keep the water particles on its surface with the attraction of electrostatic forces and the fusion of water particles together that makes them like a vessel that keeps water from leaking down.

Third: Germination stage

Germination of seeds start at this stage. When water is sufficient , the seed embryo becomes active and absorbs simple nutritious material (the complex nutritious material are broken down by specific enzymes). First, the radical grows down (with the will of Allah), between the soil particles, in order to discover an appropriate environment in which to germinate provide the plant with whatever it needs. The plumule grows next, which eventually turns into green leaves. This plumule goes up penetrating the soil particles and appearing above the soil level, directing itself towards the light.

Scientific signs in the verses of germination:

Those three stages which the plant goes through until it appears over the soil level, were mentioned by Allah in the Qur'an in very accurate words:

"And you see the earth barren, but when we send down water (rain) on it, it is stirred (to life), it swells and puts forth every lovely kind (of growth)."

(Qur'an, 22:5)

and the verse:

"And among His Signs (is this), that you see the earth barren, but when We send down water (rain) to it, it is stirred to life and growth (of vegitations). Verily, He Who gives it life, surely, (He) is Able to give life to the dead (on the Day of Resurrection). Indeed! He is Able to do all things."

(Qur'an, 41:39)

We see the word "agitation" clearly expresses the effect of the water when it descends on the soil, shown in the movement of its particles due to electrostatic charges and collision between water and soil particles as mentioned above. Also the term "swollen", means growing bigger and increased in thickness as we explained due to the increase in the size of the particles and its thickness due to absorption of water with the dissolved nutritive elements. It swells to act as a reservoir for the water necessary to revive the soil. This makes one contemplate the verse:

"And We sent down from the sky water (rain) in (due) measure, and We gave it lodging in the earth."

(Qur'an, 23:18)

Then the root and plumule grow, which is the germination stage, mentioned in the Verse. The plant would then grow above the soil level, give its fruit and provide the means of life for human beings (blessing) provided by Allah to his slaves. All this is achieved in accordance with a perfect arrangement and accurate timing because it is done by Allah who perfected all that He created.

"Look then at the effects (results) of Allah's Mercy, how He revives the earth after its death. Verily! That (Allah) Who revived the earth after its death shall indeed raise the dead (on the Day of Resurrection), and He is Able to do all things."

(Qur'an, 30:50)

(22:73) THE FLY

"… Cannot create (even) a fly…"

"O men! Here is a parable set forth! Listen to it! Those on whom, besides Allah, you call, cannot create (even) a fly, if they all met together for the purpose! And if the fly should snatch away anything from them, they would have no power to release it from the fly. Feeble are those who petition and those whom they petition! No just estimate have they made of Allah: for Allah is He Who is strong and able to Carry out His Will."

(Qur'an, 22:73,74)

PANORAMIC SIGHT FROM THOUSANDS OF LENSES

The hexagonal shaped lenses constituting the eyes of a fly provide a much larger area of sight than an ordinary lens does. The number of these lenses may sometimes be

as many as 5.000 in some flies. Additionally, the spherical structure of the eyes also enables the fly to see its back, and thus gives it a great advantage against its enemies.

THE ABSORBENT PUMP OF THE FLY

Another specific feature of the flies is the way they digest food. Unlike many other living organisms, flies digest food not in their mouth, but outside of their body. They pour a special liquid over the food by means of their trunk, which makes the food get in the proper degree of consistency for absorption. Then the fly absorbs the food with the absorbent pumps in its throat.

(23:12) THE HUMAN BODY - elements of the earth's crust

Today, when human tissue is analyzed, it is found to contain exactly the same eighteen most abundant elements in the earth's crust. These are: Oxygen, Silicon, Aluminum, Iron, Calcium, Sodium, Potassium, Magnesium, Hydrogen, Chlorine, Iodine, Manganese, Phosphorous, Lead, Copper, Silver, Carbon and Zinc.

The Qur'an very accurately instates that fact with the following words:

"We have created man from a 'sulalah' (quintessence or embodiment) of clay."

(Qur'an, 23:12)

The fact that we are created from clay is indeed mentioned in the Scripture preceding the Qur'an, however, it is the word 'sulalah' which literally means (an active representative sample) that includes the biological fact that coincides with modern knowledge.

(23:12-14) HUMAN EMBRYONIC DEVELOPMENT

"We created man from an extract of clay. Then We made him as a drop in a place of settlement, firmly fixed. Then We made the drop into an alaqah* (leech, suspended thing, blood clot), then We made the alaqah into a mudghah** (chewed, lump)."

(Qur'an, 23:12-14)

In comparing a leech to the embryo at the transitory stage (alaqah) we find similarity between the two.

Also, the embryo at this stage obtains nourishment from the blood of the mother, similar to the leech that feeds on the blood of others.

The second meaning of the word ***alaqah*** is "suspended thing."

Suspension of an Embryo during the early stages in the womb of the mother. (About 15 days old). The actual size of the embryo is about 0.6 mm.

When comparing the appearance of an embryo at the ***mugdah*** stage with a piece of gum that has been chewed, we find similarity between the two.

We find that the external appearance of the embryo and its sacs during the transitory stage (alaqah) is similar to that of a blood clot. This is due to the presence of relatively large amounts of blood present in the embryo during this stage.

The blood in the embryo does not circulate until the end of the third week.

Thus the embryo is like a clot of blood at this stage!

The embryo at the *mudghah* stage acquires the appearance of a chewed-like substance because of the somites at the back of the embryo that “somewhat resemble teeth marks in a chewed substance.”

40 DAYS IN THE WOMB

As we know, chromosomes contain all the characteristics which the new human being will have such as the color of the eyes, skin, hair, etc. Hence, many of the details in the human being’s make-up are determined in his chromosomes. Chromosomes begin to form during the early nutfah stage of embryonic development. In other words, the distinguishing features of the new human being are determined from the very beginning at the nutfah stage.

During the first 40 days of gestation, all the body parts and organs are completely, though consecutively formed. The Prophet Muhammad, (sallallahu ‘alaihi wa sallam), has informed us in a hadith that:

“In every one of you, all components of your creation are gathered together in your mothers’ womb by 40 days”.

(Narrated in Saheeh Muslim and Al-Bukhaari).

In another hadith, Prophet Muhammad (sallallahu ‘alaihi wa sallam) said:

“When forty-two nights have passed over the drop (nutfah), Allah sends an angel to it, who shapes it and makes its ears, eyes, skin, flesh and bones. Then he says, “O Lord, is it male or female?” and your Lord decides what he wishes.” (Narrated in Saheeh Muslim).

The first 40 days constitute a clearly distinguishable stage of embryogenesis. The absolute precision and accuracy of those hadiths particularly impress us. So the two hadiths that have been noted can provide us with a specific timetable for the main embryological development before 40 days. These hadiths could not have been obtained on the basis of the scientific knowledge that was available at the time of their recording. It follows, that not only is there no conflict between genetics and religion, but in fact religion can guide science by adding revelation to some traditional scientific approaches. That there exists statements in the Qur’an shown by science to be valid, which supports knowledge in the Qur’an having been derived from Allah.
This is true.

Muslims can also lead the way in the pursuit of knowledge and that they can accord knowledge its proper status. Moreover, Muslims know how to use knowledge as proof of the existence of Allah, May Allah be Exalted and Glorified, and to affirm the Messengership of Muhammad (sallallahu ‘alaihi wa sallam).

“HE created you from a single being; then from that HE made its mate; and HE has sent down for you of the cattle eight pairs. HE creates you in the wombs of your mothers, creation after creation, through three stages of darkness. This is ALLAH,

your Lord. HIS is the Kingdom. There is no god but HE. Wither then are you being turned away?"

(Qur'an, 39:6)

How did Mohammad (pbuh) know about the 20th century Medical fact known as " the Uterus and its 3 stages of development "?

(23:112,113) RELATIVITY IN THE QUR'AN

The conclusion to which we are led by the findings of modern science is that time is not an absolute fact as supposed by materialists, but only a relative perception. What is more interesting is that this fact, undiscovered until the 20th century by science, was imparted to mankind in the Qur'an 14 centuries ago.

There are various references in the Qur'an to the relativity of time. In some verses, it is indicated that people perceive time differently and that sometimes people can perceive a very short period of time as a very lengthy one.

The following conversation of people held during their judgement in the Hereafter is a good example of this:

He will say: "What number of years did ye stay on earth?" They will say: "We stayed a day or part of a day: but ask those who keep account." He will say: "Ye stayed not but a little, - if ye had only known!"

(Qur'an, 23:112-114)

In some other verses it is stated that time may flow at different paces in different settings:

"Yet they ask thee to hasten on the Punishment! But Allah will not fail in His Promise. Verily a Day in the sight of thy Lord is like a thousand years of your reckoning."

(Qur'an, 22:47)

"***The angels and the spirit ascend unto him in a day the measure whereof is (as) fifty thousand years."***

(Qur'an, 70:4)

These verses are all manifest expressions of the relativity of time.

The fact that this result only recently understood by science in the 20th century was communicated to man 1,400 years ago by the Qur'an is an indication of the revelation of the Qur'an by Allah, Who encompasses the whole time and space.

(24:35) NUCLEAR REACTIONS IN STARS

First generation stars only consisted of Hydrogen, and trace amounts of Helium (around 2% of their mass) that were created by the "Big-Bang" (if you subscribe to that theory). Second generation stars, and planets then "inherit" the waste products of long-dead stars (Helium, Carbon, Nitrogen, Oxygen, etc.), and incorporate them into their structures. Third generation stars are similar in the same manner, only they contain more of the "waste" products. Since Carbon is present in almost all stars, (Red Dwarves are debatable, since they may actually be first-generation stars that are still surviving to this day!) it can be used in fusion reactions at different temperatures.

There is a chain of six reactions that occurs at 10 000 000 ^{0}K in every second-generation main-sequence star.

Massive newly formed stars start to shrink under their own gravitational pull. As a result, their central regions become denser and, thus, hot. When the material in the center of the star has heated up sufficiently, to be exact, at least seven million degrees K., nuclear reactions begin. These reactions, which are similar to those, which take place in a hydrogen bomb, continue throughout the life of the star. These reactions are distinctly different from ordinary combustion (as in burning wood). What actually takes place inside a star is that hydrogen is converted to helium with the emission of huge energy.

This is precisely what the Qur'an speaks of with the words:

"…As if it were a brilliant star……..whose oil (fuel) is well lit, even no fire touches it."

(Qur'an, 24:35)

The verse mentions a star, it's fuel, and a reaction which is not combustion (fire). Short of saying 'nuclear reactions' the verse is a very accurate description of what goes on inside a star.

These nuclear reactions cause the stars to radiate all types of radiation into space, from x-rays and gamma rays in the short waves all the way to the longer radio waves. The visible section of those waves, which are found between the ultra-violet and the infrared, is what we call sunlight.

(24:40) DEEP SEA CURRENTS

In the Qur'an we read:

"Or as darkness on a vast, abysmal sea. There covers it a wave, above which is a wave, above which is a cloud. Layer upon layer of darkness."

(Qur'an, 24:40)

Mankind began to build submersibles in the seventeenth century. The first crude craft known to have ventured underwater was built by Cornelis Drebbel, court engineer to James I of England, and was demonstrated on the Thames River in 1620. From then onwards, development of submarines continued until the twentieth century, or 1954 to be exact, when the first nuclear submarine became a reality.

With mankind's study of the sea came the realization that the waters lying underneath the surface waves were not the place of tranquil calmness they were previously envisioned to be.

Rather, there were underwater currents called deep-sea currents that could at times become such violent storms as to rearrange sediments in the ocean bottom. How did Muhammad (pbuh) know about these underwater currents centuries before mankind invented the tools necessary for underwater exploration?

"Say: He who knows the secrets in the heavens and the earth sent it down."

(Qur'an, 25:6)

It is worth mentioning here in connection with the above verse that some scientists have interpreted the *"layer upon layer of darkness"* to be the gradual separation of the light spectrum within the ocean, one color at a time until complete darkness is finally achieved. In other words, at one depth, the yellow bandwidth is suppressed and "yellow darkness" is achieved. At another depth, the red bandwidth is suppressed and "red darkness" is achieved, and so forth.

There are many other scientific statements made in the Qur'an which were only discovered to be scientifically accurate many centuries after Muhammad's death. Many of them have only been discovered in this century. They range over many fields of science including Anatomy, Chemistry, Astronomy, Geology, Hydrology, and many other disciplines which are only beginning to be addressed by scientists today.

For example, the Qur'an makes reference to the fact that a human's pain receptors are located in the skin (Al-Nissa(4):56). That the frontal lobes of the brain are responsible for lying and sin (Al-Alak(96):16). That mountains have below them roots that extend deep into the earth's surface (Al-Naba(78):7).

That mountains pin the earth's crust and prevent it from moving (Al-Nahl(16):15). That there exists a physical barrier between bodies of fresh and salt water (Al-Rahman (55):20).

There is also information regarding the formation of milk in cows (Al-Nahl(16):66). And on and on. So where was Muhammad (pbuh) getting all of these scientific facts if not from the Creator of mankind and the universe? Allah Almighty asks:

"Is this sorcery or is it that you do not see?"

(Qur'an, 52:15)

(24:40) DARKNESS IN A DEEP SEA

" Or is like the darkness in a deep sea. It is covered by waves, above which are waves, above which are clouds. Darkness, one above another. If a man stretches out his hand, he cannot see it..."

(Qur'an, 24:40)

The darkness in deep seas and oceans is found around a depth of 200 meters and below. At this depth, there is almost no light. Below a dept of 1000 meters there is no light at all. Scientists have only recently discovered that there are internal waves which "occur on density interfaces between layers of different densities.

The internal waves cover the deep waters of seas and oceans because the deep waters have a higher density than the waters above them. Internal waves act like surface waves. They can also break just like surface waves. The human eye cannot see internal waves, but they can be detected by studying temperature or salinity changes at a given location.

(24:43) THE QUR'AN ON CLOUDS

Scientists have studied cloud types and have realized that rain clouds are formed and shaped according to definite systems and certain steps connected with certain types of wind and clouds.

One kind of rain cloud is the cumulonimbus cloud associated with thunderstorms. Meteorologists have studied how cumulonimbus clouds are formed and how they produce rain, hail, and lightning.

They have found that cumulonimbus cloud go through the following steps to produce rain:

1) The clouds are pushed by the wind: Cumulonimbus clouds begin to form when wind pushes some small pieces of clouds (cumulus) clouds to an area where these clouds converge.

2) Joining: Then the small clouds join together forming a larger cloud.

3) Stacking: When the small clouds join together, updrafts within the larger cloud increase. The updrafts near the center of the cloud are stronger than those near the edges. These updrafts cause the cloud body to grow vertically, so the cloud is stacked up. This vertical growth causes the cloud body to stretch into cooler regions of the atmosphere where drops of water and hail formulate and begin to grow larger and larger. When these drops of water and hail become too heavy for the updrafts to support them, they begin to fall from the cloud as rain, hail, etc.

Allah said in the Qur'an: (Notice the great detail)

Have you not seen how Allah makes the clouds move gently, then joins them together, then makes them into a stack, and then you see the rain come out of it...?

(Qur'an, 24:43)

Meteorologists have only recently come to know these details of cloud formation, structure, and function by using advanced equipment like planes, satellites, computers, balloons, and other equipment to study winds and its direction, to measure humidity and its variations, and to determine the levels and variations of atmospheric pressure.

(24:43) HAIL AND LIGHTNING

After mentioning clouds and rain verse 24:43 speaks about hail and lightning:

"And He sends down hail from mountains (clouds) in the sky, and He strikes with it whomever He wills, and turns it from whoever He wills. The vivid flash of its lightning nearly blind s the sight."

(Qur'an, 24:43)

Meteorologists have found that cumulonimbus clouds, that shower hail, reach a height of 25,000 to 30,000 feet (4.7 to 5.7 miles), like mountains, as the Qur'an said, And He sends down hail from mountains (clouds) in the sky...

This verse may raise a question. Why does the verse say ...its lightning in reference to the hail? Does this mean that hail is the major factor in producing lightning? Let us see what the book entitled Meteorology Today, says on this. It says that clouds become electrified as hail falls through a region in the could of supercooled droplets and ice crystals. As liquid droplets collide with hail, they freeze on contact and release latent heat. This keeps the surface of the hail warmer than that of the surrounding ice crystals. When the hail comes in contact with and ice crystal, and important phenomenon occurs. Electrons flow from the colder object toward the warmer object. Hence, the hail becomes negatively charged.

The same effect occurs when super cooled droplets come in contact with a piece of hail and tiny splinters of positively charged ice break off. These lighter, positively charged particles are then carried to the upper part of the could by updrafts. The hail left with a negative charge, fall toward the bottom of the cloud, thus the lower part of the cloud becomes negatively charged. These negative charges are then discharged to the ground as lightning. We conclude from this that hail is the major factor in producing lightning.

This information on lightning was discovered recently. Until 1600 AD, Aristotle's ideas on meteorology were dominant or example, he said that the atmosphere contains two kinds of exhalation, moist and dry. He also said that thunder is the sound of the collision of the dry exhalation with the neighboring clouds, and lightning is the inflaming and burning of the dry exhalation with a thin and faint fire. These are some of the ideas on meteorology that were dominant at the time of the Qur'an's revelation, fourteen centuries ago.

(25:25) ANGELS AND HEAVEN'S GATES

"A day when the heavens and the clouds will be rent asunder and the angels will be sent down a grand descent."

(Qur'an, 25:25)

"And think of the day when We remove the hills and you see the earth emerging and we gather them together so as to leave not one of them behind."

(Qur'an, 18:47)

The collapsing universe will be ultimately destroyed in a fireball which physicists call the "Big Crunch." Every one will be gathered. Any one remaining behind will regress to nothingness, because the time will be running backwards. The angels of "the grand descent" would probably accomplish the gathering and removal of humans to "The beyond".

In our final journey through the gates that will open in the center sky we would go across many planes or dimensions. The word "ride" is used in the Qur'an as if this journey will be accomplished by riding on "something."

"That you shall "ride" on from plane to plane."

(Qur'an, 84:19)

(25:53) BARRIERS BETWEEN THE SEAS AND RIVERS

Modern Science has discovered that in the places where two different seas meet, there is a barrier between them. This barrier divides the two seas so that each sea has its own temperature, salinity and density.

Satellite photography shows the divider between the Mediterranean and the Atlantic Ocean. In the middle of the photo we can see a colored triangle, this is the base of the rock of Gibraltar. We can observe a colored partition between the two bodies of water, although the naked human eye cannot perceive it in nature. This has become possible by means of satellite photography and remote-sensing techniques.

These are partitions that can only be seen and perceived by scientific research and modern technology. Allah has informed us in the Qur'an that:

"He has let free the two seas meeting together: Between them is a barrier that they do not transgress."

(Qur'an, 55:19-20)

Traditionally, there have been two major interpretations of this verse. The Qur'an goes on to state that there is barrier between them, means that this barrier will simply prevent the seas from encroaching upon each other or flooding over each other.

Proponents of the second opinion ask how can there be a barrier between the seas so that they do not encroach upon each other, while the verse indicates that the seas meet together? They concluded that the seas do not meet and sought another meaning for the term *"maraja."* But now modern science provides us with enough information to settle this issue.

The seas do meet together, as we have seen, for example, in the picture of the Mediterranean and Atlantic Ocean. Even though there is a slanted water barrier between them, we now know that through this barrier the water from each sea passes to the other. But when we the water from one sea enters the other sea, it looses its distinctive characteristics and becomes homogenized with the other water. In a way, this barrier serves as a transitional homogenizing area for the two waters. This is an excellent example of Islamic modern scientific research. Modern techniques can thus be used to prove the inimitability of the Qur'an.

Modern Science has discovered that in estuaries, where fresh (sweet) and salt water meet, the situation is somewhat different from what is found in places where two seas meet. It has been discovered that what distinguishes fresh water from salt water in estuaries is a pycnocline zone with a marked density, discontinuity separating the two layers. This partition (zone of separation) has a different salinity from the fresh water and from the salt water.

For example, Mediterranean Sea water is warm, saline, and less dense, compared to Atlantic Ocean water. When Mediterranean Sea water enters the Atlantic over the Gibraltar sill, it moves several hundred kilometers into the Atlantic at a depth of about 1000 meters with its own warm, saline, and less dense characteristics. The Mediterranean water stabilizes at this depth.

Although there are large waves, strong currents, and tides in these seas, they do not mix or transgress this barrier.

But when the Qur'an speaks about the divider between fresh and salt water, it mentions the existence of "a forbidding partition" with the barrier. God has said in the Qur'an:

"He is the one who has set free the two kinds of water, one sweet and palatable, and the other salty and bitter. And He has made between them a barrier and a forbidding partition."

(Qur'an, 25:53)

One may ask, why did the Qur'an mention the partition when speaking about the divider between fresh and salt water, but did not mention it when speaking about the divider between the two seas?

This information has been discovered only recently, using advanced equipment to measure temperature, salinity, density, oxygen dissolubility, etc. The human eye cannot see the difference between the two seas that meet, rather the two seas appear to us as one homogeneous sea. Likewise, the human eye cannot see the division of water in estuaries into the three kinds: fresh water, salt water, and the partition (zone of separation).

How did Mohammad (pbuh) know about the 20th century scientific fact known as " the systems of water"? Qur'an describes how the two seas (rivers and seas) flow. Rivers usually have sweeter water than the Sea, but yet they never overcome each other.

(25:54) THE CREATION OF HUMANKIND FROM WATER

"And God it is who has created man of water, and has appointed for him kindred by blood and kindred by marriage. Indeed, your Lord is ever powerful."

(Qur'an, 25:54)

The concept of humankind being created from water may sound as something preposterous to the unknowing. If I stood in the desert 1400 years back and proclaimed that I am made of water, it would take away tremendously from my credibility as a knowledgeable person.

It was only shown around 200 years back, after the discovery of the microscope, that the basic substance of the ovum cell from which the human develops has as its basic functioning portion the cytoplasm which is at least 80% water.

How Muhammed or anyone else at that time knew about this seemingly odd idea, is a challenge to human explanation. The contents of cytoplasm were analyzed and documented centuries after the Koran.

Carrying the similar idea is this Koranic verse:

"Allah (God) has created every beast of the earth of water. Of them is a kind that goes upon its belly, and a kind that goes upon two legs and a kind that goes upon four."

(Qur'an, 24:45)

The standard "Animal Cell" that is reproduced in every intro biology book has as its main portions the cytoplasm that is at least 80% water. Indeed such information in the Koran forces us to reexamine the claim that Muhammed or a group of people made up the Koran.

The Koran mentions that all life "originated" from water (Koran chapter 21, verse 30)and that man himself is "created" of water and so are all the animals on earth (Koran 25:54, and 24:45). Now these statements to an Arab would have sounded atrocious in that day and age. Even today such statements in the Koran might cause you to wonder if scientific facts about them are unknown.

The fact that all life originated in water is well established by the scientific community, today. They have evidence to support the fact that the first living beings were algae, and they existed in water. The fact that human beings and animals are created of water is also well established since cytoplasm the basic component of "life" in any animal cell is over 80% water.

The First Life Form:

"... And We got every living thing out of water. Will they (even then) not believe."

(Qur'an, 21:30)

Life belonging to the animal kingdom appeared slightly later, they too originated in water. Those who claim that Muhammed wrote the Koran are suggesting that Muhammed had an idea on the origin of species not known to people living in his day and time, and that he had access to geological and archaeological data and understood them well. Such a claim is preposterous. Indeed the Koran shows itself to be from one who was aware of the mysteries of the universe.

The water that condensed at the early stages of the development of the earth and formed the sea oceans mixed with the dirt to form mud. Out of the molding mud was born the simplest living organisms in the shape of bacteria and single cell organisms. From this common origin of both plants and animals was developed two types of microscopic organisms. The first type gave birth to all plants while the second type developed into animals.

The first of these primitive organisms is thought to have come to exist around 2.7 billion years ago. All these organisms originated from water then gradually developed into more complexes living creatures that moved to land. This fact is also started in the Qur'an:

"… And We made, from water, every living thing."

(Qur'an, 21:30)

It is indeed interesting, and along the same lines, to note that it was found that all liquid in our bodies (blood, saliva, tears, sweat…etc) contain the same percentage of salt as is found in the oceans.

From the early organisms that moved to land developed the first reptiles around 200 million years ago. The first birds flew around 130 million years ago and the first man, Homo Habilis, walked on earth one million years ago. The first Homo Sapiens, who are thought of as our direct ancestors, walked on earth a mere 15,000 years ago.

"And God it is who has created man of water, and has appointed for him kindred by blood and kindred by marriage. Indeed, your Lord is ever powerful."

(Qur'an, 25:54)

(27:88) EARTH'S MOVEMENT IN SPACE

The earth rotates round the sun once every 365.25 days. Whilst doing so it is tilted on it's axis at an angle of 33 degrees. As a result the seasons occur making it possible for the habitation of the planet. If the earth were not tilted on its axis the poles would have been submerged in continuous cold darkness preventing the seasonal thaw of the polar

ice. The accumulating ice would eventually result in nonshifting frozen poles and little water elsewhere.

The rotation of the earth around the sun was not known in the 7th century. At that time it was still thought of the earth as a nonmoving planet at the center of the universe. Due to the apparent movement of the sun, moon and stars in the sky, it was thought that they are moving around the earth.

The movement of the earth in space is confirmed in the following verse:

"When you look at the mountains, you think that they are standing still. But they are moving, like the clouds. Such is the manufacture of God, who perfected everything. He is fully Cognizant of everything you do."

(Qur'an, 27:88)

Since the earth is moving in space thus everything on earth is moving with it, including the mountains.

The earth rotates about an axis going from the south to the North Pole. The main force acting on the earth is the force of gravity from the sun. Because this force acts on the center of mass of the earth it does produce any torque with respect to the axis of rotation and so the angular momentum cannot change. This is what gives us a day of constant length since prehistoric times. Not only that but the axis of rotation of earth is tilted with respect to the plane formed by the orbit of earth around the sun. This tilt is what causes the seasons to change through the year because when we are on one side of the sun the tilt causes the northern hemisphere to see the sun at closer to normal angle of incidence than when the earth is on the other side of the sun. The result is the difference in climate between summer and winter at a given geographical location. It is because the angular momentum associated with the earths almost circular trajectory about the sun is conserved that it takes exactly half a year each year to get from one side of the sun to the other.

(29:41) THE THREAD OF THE SPIDER

The spider named Dinopis has a great skill for hunting. Rather than weaving a static web and waiting for its prey, it weaves a small yet highly unusual web that it throws on its prey. Afterwards, it tightly wraps up its prey with this web. The entrapped insect can do nothing to extricate itself. The web is so perfectly constructed that the insect gets even more entangled as it gets more alarmed. In order to store its food, the spider wraps the prey with extra strands, almost as if it were packaging it.

How does this spider make a web so excellent in its mechanical design and chemical structure? It is impossible for the spider to have acquired such a skill by coincidence as is claimed by evolutionists. The spider is devoid of faculties such as learning and memorizing and does not have even a brain to perform these things. Obviously, its Creator, Allah, Who is Exalted in Power, bestows this skill on the spider.

Very important miracles are hidden in the thread of the spiders. This thread, with a diameter of less than one thousandth of a millimeter, is 5 times stronger than a steel wire

having the same thickness. This thread has yet another characteristic of being extremely light. A length of this thread long enough to encircle the world would weigh only 320 grams. Steel, a substance specially produced in industrial works, is one of the strongest materials manufactured by mankind. However, the spider can produce in its body a far firmer thread than steel. While man produces steel, he makes use of his centuries-old knowledge and technology; which knowledge or technology, then, does the spider use while producing its thread?

"The likeness of those who choose other patrons than Allah is as the likeness of the spider when she taketh unto herself a house, and lo! the frailest of all houses is the spider's house, if they but knew."

(Qur'an, 29:41)

As we see, all technological and technical means at the disposal mankind lag behind those of a spider.

(30:2,3) THE BIGGEST DEPRESSION

An interesting geographical fact, relating to high and low land on earth, is mentioned in the following verse

"Alif Laam Meem, the Romans have been defeated, in the lowest part of the land (adnal-ardh), but after defeat they will soon be victorious."

(Qur'an, 30:1-3)

It is now known that the area near the Dead Sea, which was the scene of these battles, is the lowest spot on earth below sea level (1,339 ft.)!

The Dead Sea is also referred to in the Qur'an in a different context and that is in connection with the story of Lot.

Lot, who was a nephew of Abraham, was a believer and follower of Abraham. When Abraham left his home in Chaldoea and migrated to Syria and Palestine, Lot accepted voluntary exile to follow him. The people of Lot who were indulging in grave immorality ridiculed him saying:

"Show us the wrath of your God, if you tell the truth."

(Qur'an, 29:29)

The Qur'an relates the story by indicating that God undertook to destroy the people of that town except Lot and the believers who followed him:

"We are going to bring down on the people of this town a punishment from heaven because of their wicked sin, and We have left thereof an evident sign for any people who care to understand."

(Qur'an, 29:34-35)

The punishment was a rain of brimstone, which completely overwhelmed the towns, with possibly an earthquake or volcanic eruptions. Today, the whole tract on the East Side of the Dead Sea where the towns were situated, is covered with sulphurous salts and is deadly to animal and plant life. The Dead Sea itself is called "Bahr Lout" in Arabic that means the Sea of Lot. It is a scene of utter desolation that stands as a permanent symbol of the destruction.

The term "adna" means both nearer and lowest. The commentators of the Qur'an, May Allah be pleased with all of them, were of the opinion that "adnal-ardh" meant the nearest land to the Arabian Peninsula. However, the second meaning is also there. In this way, the Glorious Qur'an gives one word several meanings, as described by the Prophet Muhammad
(sallallahu 'alaihi wa sallam) when he said:

"I have been given the most comprehensive words."

(Al-Bukhaari and Muslim)

When we investigated the lowest part of the earth, we found that it was exactly the same spot that witnessed the battle in which the Romans were defeated.

(30:22) THE DIVERSITY OF MANKIND

"And among His Signs is the creation of the heavens and the earth, and the variations in your languages and your colors; verily in that are Signs for those who know."

(Qur'an, 30:22)

"O mankind! We created you from a male and female, and made you into nations and tribes, that you may know each other. Verily the most honored of you in the sight of Allah is the one who is most deeply conscious of Him..."

(Qur'an, 49:13)

The racial and linguistic differences between humans are not meant as reasons to discriminate. Allah simply describes this diversity as a part of His creative power, and He does not single out any race as being inherently superior to the others. The emphasis in [49:13], in fact, is to learn to communicate with one another.

(30:30) NO CHANGE IN GENETIC CODE

THE ORIGINATOR OF THE GENETIC CODE MAKES NO CHANGE:

"...There's no changing what Allah [God] has created. That is the established standard religion, but most among humankind know not."

(Qur'an, 30:30)

Nilson Heribert of the University of Lund, Sweden states: “Species are types that do not change and cannot change.”

Genetic engineering distorts God’s creation or repairs what has been distorted of it. It cannot change species. It operates within the possibilities God has created. The above verse of the Koran and the quote by Nilson Heribert state the same thing.

(30:41) POLLUTION AND THE WASTING OF NATURAL RESOURCES

“Rottenness (decay/corruption) has appeared on land and sea because of what the hands of men have earned, that (Allah) may give them a taste of some of their deeds, in order that they may turn back (from evil).”

(Qur’an, 30:41)

“O Children of Adam! Wear your beautiful apparel at every time and place of prayer; eat and drink, but waste not by excess, for Allah does not love those who waste.”

(Qur’an, 7:31)

The importance of understanding the ecological consequences of our actions as individuals or as a society was not fully appreciated until this century. We now understand that we cannot alter the face of the earth indiscriminately without paying some penalty, which may be disastrous. We also understand that caution ought to be applied globally, not just locally but truly “on land and sea”.

Ecological awareness does not imply asceticism however. According to the Qur’an, we are not forbidden to take pleasure in this life, however we are forbidden from wasting resources needlessly.

(30:48) THE WATER CYCLE

Most of us are familiar with the water cycle from our classes in middle school, where we learned how a drop of seawater evaporates, then becomes a drop of rainwater, and then finally returns to the sea via rivers or underground channels. The first person in modern times to understand this process was Bernard Palissy who described it correctly in 1580.

Prior to him, most of the ancient Greek and Roman scholars had various incomplete or incorrect theories on the water cycle (Plato, for example, believed that precipitation eventually descended into the abyss called Tartarus and from there it fed into the oceans).

The Qur'an does not give a complete description of the water cycle from start to end, however there are a few precise references to specific stages. Perhaps the most fascinating of these references are the following two verses on rain clouds:

"It is Allah Who sends the winds, and then they raise clouds: then He spreads them in the sky as He wills and makes them dark, then you see the drops issue from the midst of them..."

(Qur'an, 30:48)

"Don't you see how Allah drives clouds with force, then joins them together, then makes them into a heap? - Then you see the drops issue from the midst of them. And He sends down from the sky mountains (of clouds) wherein is hail: He strikes therewith whom He pleases and He turns it away from whom He pleases. The flash of His lightning well-nigh snatches away the sight."

(Qur'an, 24:43))

The two verses are describing the stages in the formation of rain clouds, which is in turn a stage in the water cycle. A close examination of these two verses suggests that they make reference to two different phenomena, one of "spreading" the clouds and the other of "joining" them together, two different processes by which rain clouds might be formed. Modern meteorology has come to this very conclusion within the last two centuries. There are two types of clouds, which can yield precipitation, and their shape classifies them: stratus (layer-type) and cumulus (heap- type).

The precipitate layer clouds are further subdivided into stratus and nimbostratus (nimbo meaning rain). The first verse above on rain clouds ([30:48]) precisely sums up the formation of layer rain clouds. It is known today that these types of clouds are started under conditions of gradual, rising winds:

"...And then they [winds] raise clouds..."

(Qur'an, 30:48)

Next, the cloud takes on its distinctive shape, that of a layer:

"...Then He spreads them..."

(Qur'an, 30:48)

If the conditions are right (i.e. low enough temperature, high enough humidity, etc.), the cloud droplets further condense into (larger) rain droplets, and we observe this effect from the ground as a darkening of the cloud layer:

"...And makes them dark..."

(Qur'an, 30:48)

Finally, drops of rain fall from the cloud.

"...Then you see the drops issue from the midst of them..."

(Qur'an, 30:48)

The second type of precipitate cloud is the heap type, and it is subdivided into cumulus, cumulonimbus, and stratocumulus.
These clouds are characterized by being puffy-shaped and piled upon each other. Cumulus and cumulonimbus are the true heap clouds - stratocumulus is a form of degenerated, spread-out cumulus. The second verse above on rain clouds ([24:43]) describes the formation of heap rain clouds. These clouds are formed under conditions of strong updrafts (thermals) and downdrafts of air:

"...Drives clouds with force..."
(Qur'an, 24:43)

As the puffs of clouds form, they may unite into a single giant cloud, all piled up on top of one another:

"...Then joins them together, then makes them into a heap..."
(Qur'an, 24:43)

At this point, either a cumulus or a cumulonimbus cloud has formed - either of which can yield rain. The rest of the verse is applicable to the case of a cumulonimbus (which is familiar to all of us as the towering thunderstorm cloud). If the heap cloud assumes large vertical proportions, then it can appear to the observer on the ground as a huge mountain or hill, but more importantly, by extending high into the atmosphere, the upper cloud droplets can freeze and thereby yield hail:

"...And He sends down from the sky mountains (of clouds) wherein is hail..."
(Qur'an, 24:43)

Finally, cumulonimbus clouds (i.e. thunderstorms) can have one last vivid property: lightning:

"...The flash of His lightning well-nigh snatches away the sight..."
(Qur'an, 24:43)

Other Qur'anic verses deal with more stages in the water cycle.

"***And We send down water from the sky according to (due) measure, then We cause it soak into the soil. And We are most certainly able to withdraw it."***

(Qur'an, 23:18)

This is a single verse stating that rainfall is absorbed into the ground and that it can eventually be removed (drained).

"***He sends down water from the sky, and the rivers flow, each according to its measure...***" **(Qur'an, 13:17)**

"Don't you see that Allah sends down rain from the sky, and leads it through the springs in the earth?

(Qur'an, 39:21)

Two methods by which absorbed rainfall is moved are described here: surface and underground rivers.

There are other references in the Qur'an to the water cycle (e.g. [40:13], [23:18], [25:48], [29:63], and others), and all of them have the same property as the verses quoted above: modern scientific findings are fully compatible with them.

A few other verses also deal with water but in a slightly different context. They are not nearly as numerous as the verses on the water cycle.

"***Do you see the water which you drink? Do you bring it down from the cloud or do We?***"

(Qur'an, 56:68-69)

This rhetorical question emphasizes our inability to fulfill one of our oldest dreams: to control the rain. The fact is we cannot make it rain unless a pre-existing cloud is in the vicinity - and then only under the proper conditions and even then we are not assured of success. The cloud should have different sized cloud particles, a high rate of condensation from the rising air, and good vertical development. If all of these characteristics are present, then we MAY coax some more rain out through cloud seeding and various other techniques. However, modern meteorologists are unsure of its effectiveness. Regardless, it is the presence of the necessary preconditions which we have no control over, and this ultimately stops us from arbitrarily bringing down the water of any cloud in the form of rain.

The following verse describes a property of large rivers.

"***It is He who has caused to mix freely the two great bodies of water, this one pleasant-tasting and sweet and this one salty and bitter, and He made between them a barrier and a forbidding ban."***

(Qur'an, 25:53)

A description of the estuaries of large rivers is supplied by the verse above. These estuaries are relatively unusual because the outgoing fresh water of the river does not immediately mix with the salt-water of the sea into which the river empties. Instead, the fresh water penetrates deep into the salt water body before any mixing occurs, far from the mouth of the river. Small rivers do not have this property.

Finally, one more reference to clouds.

"And were they to see a piece of the sky falling down, they would (only) say "Heaps of clouds!"

(Qur'an, 52:44)

Another reference to clouds but this time in the context of responding to a challenge by an earlier peoples who ridiculed a prophet by asking him to cause a piece of the sky to fall on them, apparently thinking it to be a solid cap around the earth. Allah

refutes their challenge here, declaring that they would only find a pile of clouds, something all of us would understand today.

(31:29) THE ROUNDED SHAPE OF THE EARTH

Today we can look at a globe and know that the earth is somewhat like a ball, a sphere. The Qur'an makes certain statements that led Muslim scientists to understand long before their European counterparts that the earth is spherical. When Europe was in the dark ages thinking that the earth was flat, Muslim students were using globes for studying the earth in Islamic universities.

Since it was not the purpose of the Qur'an to teach science, the Qur'an did not need to state explicitly that the earth is spherical in shape (or more precisely, a geoid). But some of what the Qur'an says stimulates you to think of the world as a globe. Take, for example, the following verse:

"Have you not seen how God merges the night into the day and merges the day into the night?"

(Qur'an, 31:29)

"Another verse tells us that God coils the day and night around: "He coils the night upon the day and He coils the day upon the night."

(Qur'an, 39:5)

The word 'coils' in the verse above is a translation of the Arabic verb *kawwara* which is used in describing the action of coiling a turban around the head. To understand this statement fully, readers of the Qur'an had to think of the earth as a sphere.

To fully appreciate the above two statements in the Qur'an, try this experiment at home: You need a flashlight and a globe. Take these items into a dark room. Using the flashlight to simulate the light of the sun, shine the light upon the globe. Notice that only one half of the globe is lighted up. The other half is in darkness.

Half the world is having day; the other half is having night. Now, recall that the earth is continuously rotating on its axis and will go around completely in twenty-four hours. Slowly turn the globe around to simulate this rotation. Notice that as the globe turns, the day is going around the globe to light up the other half of the world. The night is also going around the globe to give rest to the other half of the world.

The day and night are perpetually coiling around the earth with some degree of interpenetrating. This is exactly how it appears to astronauts during their space flights.

This process of perpetual coiling, including the interpenetrating of one sector by another, is expressed in the Qur'an just as if the concept of the earth's roundness had already been conceived at the time - which was obviously not the case.

How do we explain the presence of this knowledge in the Qur'an? This obviously did not reflect the level of learning of the time, but was helpful in stimulating Muslim scientists to conceive of the earth in its real shape.

"This is no less than a reminder to (all) the worlds. And you shall certainly know the truth of it (all) after a while".

(Qur'an, 38:87-88)

Today we know that the Earth is oval shaped, bulging at the equator. Thirteen centuries ago it was thought that the earth was flat. It was not known then that the earth was round, let alone oval.

The Qur'an again states that the earth is oval:

"...And the Earth, after that, He made it like a deheya."

(Qur'an, 79:30)

The word "deheya" in Arabic means an egg, hence the oval shape. But the verse also includes a further remarkably accurate scientific fact. The words 'after that' clearly indicate that the earth acquired the oval shape at a later stage to it's formation.

Modern science will testify that the bulging of the earth at the equator is a result of the continuous spinning of the earth on it's axis, and thus had to occur sometime after the formation of the earth. The earth spins on it's axis at a speed of one thousand kilometers per hour.

(32:4) INTERSTELLAR GALACTIC MATERIAL

The Qur'an mentions a rather curious category of created things, namely things between the heavens and the earth. This mention in the Qur'an may surprise the twentieth century reader of the Qur'an. For example, one verse says as follows:

"To Him (God) belongs what is in the heavens, on earth, between them and beneath the soil"

(Qur'an, 20:6; other verses include 25:59, 32:4 and 50:38)

What is that between the heavens and the earth? The creation outside the heavens and outside the earth is a priori difficult to imagine. To understand these verses, reference must be made to the most recent observations on the existence of cosmic extragalactic material, and one must indeed go back to ideas established by contemporary science on the formation of the universe.

Scientists tell us that a primary nebula condensed, then divided up into fragments. These fragments, these galactic masses, further split up into stars and their sub-products, the planets. Each time such a division or split occurred, there remained extra material

apart from the principal elements newly formed. The scientific name for these extra materials is 'interstellar galactic material'.

Is this extra material significant? Yes. Experts in astrophysics are quite aware of such material, which have "a tendency to interfere with photometric measurements." The extra material is so rarefied that they may be referred to as dusts or smokes or gases. Yet they altogether occupy so much total space that they may correspond to "a mass possibly greater than the total mass of the galaxies." Again, we must face up to the implication of all this. How could a man living fourteen hundred years ago have known about interstellar galactic material? Was Muhammad, on whom be peace, well versed in modern astrophysics? Or is the Qur'an nothing but the Word of God? Allah, the only true God, declares in His book:

"The revelation of the scripture is from Allah, the Mighty, the Wise. Surely We [Allah] have revealed the scripture unto you [Muhammad] with truth; so worship Allah, making religion pure for Him (only)."

(Qur'an, 39:1-2)

(32:7) CLAY: THE BEGINNING OF HUMANKIND

"... Indeed we created them (humankind) of BINDING (laazib) CLAY."

(Qur'an, 37:11)

"...We BEGAN the creation of humankind from clay"

(Qur'an, 32:7)

"...We created humankind of dry clay of altered black mud."

(Qur'an, 15:26)

Only in the presence of clay which is alternately dried and then becomes moist again (Koran, 15:26) do long chains of organic molecules combine with each other to form nucleic acids.

Clay also acts like a binding magnet (Qur'an, 37:11); clay ions attract matter and incite it to react. The trace elements we see today are the result of the evolution of just such ions. In clay and binding sticky mud, carbon and nitrogen atoms have negative valences C-4 and N-3. Oxygen, phosphorous and hydrogen occurring naturally in the soil can only combine with negatively charged carbon and nitrogen to form the basic constituents of the human body.

Clay also acts as a desiccator, removing water so those large organic molecules can be formed. Via God's will intelligent life evolved out of clay. (Qur'an, 32:7)

(32:9) SCIENTIFIC SIGNS IN THE VERSES OF THE QUR'AN OF HEARING AND VISION

Allah The Glorified says in the Qur'an:

"He gave you hearing (ears), sight (eyes) and hearts. Little is the thanks you give!"

(Qur'an, 32:9)

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Whenever the word "hearing" was mentioned in the Qur'an, it always meant the sense of hearing speeches, voices and conceptualizing the information they included. While the word "vision" meant seeing light, figures and images with your eyes 88 out of the 148 times, otherwise it indicated contemplation, intellectual perception of the different phenomena of life and the universe and the verses of the Qur'an that one hears. It is to be noted that in all the relevant erses, the word "hearing" preceded the word "vision". Does this order have any significance?

Recent scientific findings in Embryology, Anatomy, Physiology and Medicine.

1. Embryonic development of the ear and eye.

The auditory system of the embryo develops before the visual system. In the first month of embryonic life, the auditory system reaches its normal size, equivalent to that of an adult. In the 23rd week of pregnancy, the ear is fully developed, and the inner ear is capable of hearing in the fifth month. As for the eye, the retina which is the sensitive part to light is not developed until the 25th week, and the eye lids remain closed up to the 26th week of pregnancy. The optic nerve is not developed enough to transfer visual nerve signals efficiently until the 10th week after delivery and eye development is complete at 10 years of age.

2. Hearing and vision.

It is now evident that the fetus can hear the sound of his mother's heart and bowels. Auditory nerve signals in the inner ear and auditory nerve are developed, and can be recorded with lab equipment. This is taken as a scientific proof that the fetus can hear at this early stage. These signals were not recorded for the visual system because the fetus cannot see light except after delivery.

3. The full development of hearing and sight.

The fetus can hear sounds and voices naturally a few days after delivery when all the liquid and remnants of tissues in his middle ear are absorbed. A few days after delivery hearing becomes sharpened. A human being is the only creature that starts hearing sound in his mother's uterus, moreover animals do not hear sound except a few days after delivery. For example, cats start hearing 5-6 days after delivery, rabbits after 7 days, and dogs after 10 days. The sight of a human being is very weak at delivery, almost non-existent. A baby can't distinguish between darkness and light, and his eyes move with no ability to focus his sight onto the desired object. In the third or fourth month he can distinguish his mother or his bottle and follow their movements. In the sixth month he can recognize people's faces.

4. The development of the auditory and optical centers of the brain.

It has been proven that the functions of the auditory center of the brain, develops before those of the visual. It was even possible to record auditory nerve signals when stimulated with a sound stimulant at the beginning of the fifth month while the visual area of the brain could not be stimulated. For these reasons, the child is able to automatically learn and memorize all the auditory information before the visual ones. He understands the words that he hears, and understands them much more than his perception of drawings, pictures and writing that he sees visually.

5. Other aspects that distinguish Hearing from Vision.

People lose their sense of sight before their sense of hearing at the beginning of sleep or anesthesia and just before death, or when oxygen pressure in the air drops. Also rapid take off or acceleration during flight that some pilots or astronauts do, could cause visual impairment before complete loss of vision. But in this case the pilot would not lose all his hearing sense; a part of it would remain for sometime, which would keeps him in contact with the ground station. Another point of distinction is that the auditory scope exceeds the visual one. One can hear sounds reaching his ear from all directions and heights to an extent of 360, while if a person puts his head in a fixed position he would only be able to see figures in a very limited area.

Scientific signs in the verses of Hearing and vision.

There are many verses in the Qur'an that indicate the benefit of Hearing and Vision and in all cases hearing is mentioned before vision which raises the question about the reasons behind it and the things that distinguish hearing over vision in their origin and creation. Of these verses in Surah the Bee:

"And Allah has brought you out from the wombs of your mothers while you know nothing, and he gave hearing, sight and hearts that you might give thanks to Allah."

(Qur'an, 16:78)

Also the verse

"He gave you hearing (ears), sight (eyes) and hearts. Little is the thanks you give."

(Qur'an, 32:9),

and the verse ***"Verily! The hearing and the sight and heart of each of those you will be questioned (by Allah)."***

(Qur'an, 17:36).

Also Hadith have conformed with the Qur'an in the precedence of hearing over vision: the Prophet (Peace be upon Him) said: "when fourty nights pass after the Nutfah stage (the first stage immediately after conception) Allah sends the angel and gives him (the baby) his image and creates his sense of hearing, sense of sight, his skin, flesh and his bones...". So in this Hadith we also find a clear indication of the precedence of hearing to vision in creation and function which has been proven now by modern scientific discoveries concerning the development of the auditory system before the visual, as well as the early function of that system before delivery. The visual function is delayed to several weeks after delivery when the child is able to distinguish some figures around him. These facts were not known 14 centuries ago, much of it was not even

known before the past few years, so much so that many scientists thought that sight was more important than hearing. But several modern scientific studies have discovered several clear facts that prove the scientific signs in the verses of the Qur'an that mention hearing and vision for all the reasons that we mentioned above. Verily Allah Who is Truthful in all He says; Said in the Qur'an:

"And say [(O'Muhammed) to these polytheists and pagans etc.] "All the praises and thanks be to Allah. He will show you His Ayat (signs, in yourselves and in the universe or punisment etc..) and you shall recognize them

(Qur'an, 27:93)

"We will show them Our signs in the universe, and in their ownselves, until it becomes manifest to them that this (the Qur'an) is the truth."

(Qur'an, 41:53)

(33:63) THE HOUR OF JUDGMENT DAY

"Men ask you of the Hour. Say the knowledge of it is with Allah only. What can convey to you it may be that the Hour is near."

(Qur'an, 33 :63)

"They bid you to hasten on the doom. And if a term had not been appointed, the doom would have definitely come on them. And it will come upon them suddenly when they perceive not."

(Qur'an, 29:53)

Superficially it seems that if we knew the rate at which the expansion of the universe is slowing down then we should be able to predict when the Day of Judgment will begin.

However if time is related to the expansion of space, then we cannot observe the slowing of the expansion. This would be like trying to measure the speed of a car with a clock that is connected to its wheels. As the car slows down the clock will also slow down and speed would always appear the same.

"The threatened hour is near. None beside Allah can disclose it. Are you surprised then at this statement?"

(Qur'an, 53:57,58,59)

Even the most advanced civilization in the universe would always observe that the universe is expanding at the same rate as it started with. This of course means that the Day of Judgment cannot be predicted by any one and may come at any time. Only God or the angels who are independent of our time will perceive the slowing of time in the universe as the Day of Judgment approaches. The concept of slowing of time and higher planes is implied in the following verses:

1. "A questioner questioned concerning the doom to fall.
2. Upon the disbelieves, which none can repel.
3. From Allah, Lord of the Ascending Stairways.
4. As the angels and the Spirit ascend to Him in a day the span of that is fifty thousand years."

(Qur'an, 70:1-4) The Ascending Stairways. (Dimensions)

The ascending stairways imply many levels, planes or dimensions, and Allah is the Creator of all the dimensions. As the Day of Judgment approaches, an observation made from outside our universe will suggest that our time has slowed down as compared to some standard time that exists beyond our universe. The above verses do not say that human beings will make this observation. The observation that one day on earth has become like fifty thousand years appears to be made by Allah as the angels come back to him.

(34:3) ATOMIC WEIGHT

"He [i.e., Allah] is aware of an atom's weight in the heavens and on the earth and even anything smaller than that..."

(Qur'an, 34:3)

"And thou art not engaged in anything, and thou recitest not from HIM any portion of the Qur'an, and you do no work, but WE are Witness of you when you are engrossed therein. And there is not hidden from thy Lord even an atom's weight in the earth or in heaven. And there is nothing smaller than that or greater, but it is recorded in a clear Book."

(Qur'an, 10:61)

Atom - An atom is the smallest unit of a substance that still has all the properties of that substance. In most cases, an atom consists of protons, neutrons, and electrons. The protons and neutrons are found in the center of the atom, called the atomic nucleus, and the electrons orbit or circle around the center of the nucleus in paths called orbitals.

Atomic weight - The atomic weight of an atom is a measure of how much mass an atom has. The atomic weight is calculated by adding the number of protons and neutrons together. Atomic masses are not listed as whole numbers on the periodic table because atoms can come in forms with different amounts of neutrons. The atomic weight reported for any particular element is an average weight of all the known forms of that element.

Atomic Mass Unit (AMU): 1 mau = 1.6606×10^{-24} g, 1/12 of the mass of a carbon-12 atom.

Atomic Number: The number of protons in a nucleus.

Atomic Spectrum: The line spectrum produced when energized or excited atoms emit light.

(34:9) STONES FROM THE SKY

"See they not what is before them and behind them, of the sky and the earth? If We wished, We could cause the earth to swallow them up, or cause a piece of the sky to fall upon them. Verily in this is a Sign for every devotee that turns to Allah."

(Qur'an, 34:3)

Solar system is not consisted only of Sun and nine planets with their's satellites but of myriad of smaller bodies moving in interplanetary space. Their vastness is between microns to kilometers, and the largest have a few hundreds kilometers. In the zone between Mars and Jupiter move around one million bodies bigger than kilometer in a diameter. Even more there is those with smaller diameter. Much more cometic nucleuses - it is supposed that ten thousand of billions circling around the Sun in distances to 1/10 light of speed.

Part of asteroids and comets intercepts Earth's orbit and possibility of collision exists. It was happening in the past and as witnesses we have craters on Earth surface. Striking the Earth comets can destroy wast areas and even climate can be changed. Extinguishing of some species could be produced by those catastrophes. For the largest part of these bodies orbits are not determined, so we are never sure what is preparing for us in the heavens, and in no way we can feel if stones from the sky coming on us from "nowhere", especially if smaller dimensions.

(35:9) THE ATMOSPHERE AS A MEDIUM

The atmosphere acts as an air-conditioner that helps regulate the temperature on the surface of the earth so as to remain within the levels necessary to sustain life.

1) The atmosphere acts as a medium for the movement of clouds to supply rain to all the corners of the globe and maintain all types of vegetation.

"Do you not realize that God drives the clouds, then, gathers them together, then piles them on each other, then you see the rain coming out of them?"

(Qur'an, 24:43)

"God is the One who sends the winds to stir up clouds, then we drive them towards barren lands, and revive such lands after they were dead. Thus is the resurrection."

(Qur'an, 35:9)

2) The atmosphere acts as a medium in which sound can travel. Without the atmosphere we would not hear any sounds. That is because sound, unlike light, does not travel through vacuum.

3) Without the atmosphere there would be no air pressure. Without air pressure blood would explode out of our bodies.

(35:9) RESURRECTION OF THE DEAD

"And Allah it is Who sends the winds and they raise a cloud; then We lead it to a dead land and revive the earth after its death. Such is the Resurrection."

(Qur'an, 35:9)

Raising of clouds and growth of plants following rain are not miracles but are due to various laws of physics and biochemistry.

The Qur'anic verses suggest that revival after death is also based on some physical laws, that we are not aware of as yet. We believe that Allah is the creator of all the laws of the universe.

"What, does humankind think that they will be left aimless? Was he [she] not a drop ejaculated? Then he was a leech like structure. And He [God] created and formed. And made of him a pair, the male and the female. What, is He not then able to quicken the dead?"

(Qur'an, 75:36-40)

The above verse questions those who reject the notion of the resurrection of the dead. Which is the more difficult task: That you were created from an insignificant drop, which was so small that it couldn't be seen without a microscope, or that some day you will be formed again from your remnants? A comparison between human embryology and cloning is also made just as the above article from Encyclopedia Americana.

"What, does man think that We shall not put his bones together again? Yes indeed, We are able to shape his very fingers."

(Qur'an, 75:3-4)

Scientists recently discussed reproducing an extinct species of elephant by use of a microscopic unit of long-dead gene material. No one in the scientific community said that that was unreasonable.

The point is that the resurrection of the dead might be an unusual think but it certainly is not unreasonable.

The use of cloning techniques throws further light on the amazing nature of the Koranic verse which compares the resurrection of the dead with human development

from an insignificant zygote to the fetus.

(36:37) WHAT IS THE SPEED OF THE EARTH'S COILING?

"A token unto them is night. We strip it of the day, and lo! they are in darkness."

(Qur'an, 36:37)

At the equator, the circumference of the Earth is 40,070 kilometers, and the day is 24 hours long so the speed is 1670 kilometers/hour (1070 miles/hr).

This decreases by the cosine of your latitude so that at a latitude of 45 degrees, cos(45) = .707 and the speed is .707 x 1670 = 1180 kilometers/hr.

You can use this formula to find the speed of rotation at any latitude.

(36:38) THE APEX OF OUR SOLAR SYSTEM

The Koran mentions the movement of the sun. The sun's movement is not something that is evident to our eyes or experience but requires specialized equipment. The Koran states in chapter 36, verse 38 (36:38):

"And the sun constantly journeys towards a <u>homing place</u> for it and for the moon We have determined phases.

(Qur'an, 36:38)

Modern science has found out that the sun rotates around its axis every 26 days and is continually on a journey in space towards its homing place the solar apex, just like mentioned in the Koran 36:39. How could Muhammed have known these facts if the Koran is the product of his delusional or lying mind?

The great disk of the galactic plane spins in space through time and carries with it all objects, including our Sun. Differential rotation causes objects that are located at different distances from the center of the galaxy to rotate at different speeds. In general, different groups of objects of a similar kind tend to move together through space. For instance, the Local System of stars that includes our Sun is moving in the general direction of the bright star Vega in the constellation Lyra.

The point on the opposite side of the sky from which the Sun appears to be moving away is called the solar antapex. This apparent direction is termed the Solar Apex or Apex of the Sun's Way. The position given in astronomy books for the solar apex depends upon what group of stars we use to measure our Sun's motion.

Thus, every second we move about 20 km closer to the star Vega. However, there is plenty of time before we get there: Vega is 26.5 light-years away!

The solar apex is at approximately right ascension 270 degrees declination 34 degrees N. The point diametrically opposite the solar apex on the celestial sphere is the solar antapex, right ascension 90 degrees declination 34 degrees S.

The notion of a settled place for the sun is vividly described in chapter *Yaa Seen* of the Qur'an:

"The sun runs its coarse to a settled place. That is the decree of the Almighty, the All Knowing."

(Qur'an, 36:38)

"Settled place" is the translation of the word *mustaqarr,* which indicates an exact appointed place and time. Modern astronomy confirms that the solar system is indeed moving in space at a rate of 19,7 kilometers per second towards a point situated in the constellation of *Lyrae* whose exact location has been precisely calculated. Astronomers have even give it a name, the solar apex.

Vega, the brightest star in Lyra can't be mistaken. It is the fifth brightest star in the sky (magnitude 0.0) and has a surface temperature of almost twice that of our Sun, hence its blue color, brought out particularly well with a pair of binoculars.

As stars go, Vega is quite close, only 26.5 light-years away (remember light can travel 9.5 million, million kilometers in a year). In fact, the motion of our own Sun as it wonders though our galaxy (the Milky Way) is in the general direction of Vega, moving towards it at a rate of about 18 km a second. However, there is no chance of meeting up with Vega, even at 18 km a second the Sun and planets will take millions of years to reach Vega's present location, by which time Vega will be long gone since its moving too!

(36:39) THE PHASES OF THE MOON

The phases New Moon, First Quarter, Full Moon, and Last Quarter are defined to occur when the excess of the apparent celestial longitude of the Moon over that of the Sun are 0, 90, 180, and 270 degrees, respectively.

In practice the phases are computed by inverse interpolation of values of the excess computed at regular (daily) intervals.

The common understanding of the times of New, First Quarter, Full, and Last Quarter as applying to the times of apparent minimum illumination, 50% illumination (waxing), maximum illumination, and 50% illumination (waning), respectively, only loosely corresponds to the precise definition of the phases given above.

In particular, the times at which the Moon reaches these particular illumination levels, as viewed from a specific location on the surface of the Earth, may differ from the times of exact phases by an hour or more.

(36:39) THE MOON’S ORBIT

Moon, a part of our life. We know lots of things about it, and we put lots of names for places on it. Certainly, it has an orbit. But its orbit is like a spiral because of its revolving around the Earth, and Earth’s going at its orbit. When we draw the Moon’s orbit, we saw that it is like a date palm’s branch. But, there is a big question: How could it be written in a book 14 centuries ago?

“We appointed orbits to the Moon like a date-palm’s branch.”

(Qur’an, 36:39)

The moon and the earth both orbit the sun, since at no point in its orbit does the moon go backwards with respect to the sun. They each revolve around their common center, and all each does to the other is pull it in and out of the path each would normally follow were the other not present.

So, the moon does not, in reality, orbit the earth. It orbits the sun. Parenthetically, the moon’s orbit is tilted in such a way that, during the season when the sun is high in the sky at its highest point (noon), the moon is at its lowest, and vice-versa.

The Moon stays in orbit about the Earth because of the gravitational attraction force between the Earth and Moon. However, the orbit that the Moon follows is not a circle as was once believed. The Moon’s orbit is really an ellipse. This means the distance from the Earth, the speed, and apparent size of the Moon changes during the month.

The Moon’s orbit has an eccentricity of .055, which is over three times eccentricity of the Earth’s orbit, and this causes large differences in the distance the Moon is from the Earth during the course of a month. The Moon’s average distance is 384,000 km. However, due to the elliptical nature of the orbit the minimum distance is 363,000 km and is called perigee. The maximum distance is called apogee and is 405,000 km. The true diameter of the moon is 3,500 km (1/4 that of Earth’s) however as viewed from Earth the size of the Moon appears to change by as much as 11% from perigee and apogee.

In addition to the Earth’s gravity the Sun is also exerting a gravitational force on the Moon as well. The Sun’s gravity sometimes causes the Moon to speed up or slow down slightly in its orbit. Thus, the Moon’s orbital path is constantly being slightly altered by the Sun’s gravity. The magnitude of these variations obviously depends on the relative position of the Earth, Sun and Moon.

The end result of these interactions is that both the sidereal and synodic months are variable in length. The sidereal month (average 27d7h43m11s) can vary up to seven hours. The synodic month (average length = 29d12h44m3s) can vary by as much as 12 hours.

(36:40) THE FIXED WAY OF THE EARTH'S ROTATION

The Moon appears to move completely around the celestial sphere once in about 27.3 days as observed from the Earth. This is called a *sidereal month*, and reflects the corresponding orbital period of 27.3 days The moon takes 29.5 days to return to the same point on the celestial sphere as referenced to the Sun because of the motion of the Earth around the Sun; this is called a *synodic month* (Lunar phases as observed from the Earth are correlated with the synodic month).

There are effects that cause small fluctuations around this value that we will not discuss. Since the Moon must move Eastward among the constellations enough to go completely around the sky (360 degrees) in 27.3 days, it must move Eastward by 13.2 degrees each day (in contrast, remember that the Sun only appears to move Eastward by about 1 degree per day). Thus, with respect to the background constellations the Moon will be about 13.2 degrees further east each day. Since the celestial sphere appears to turn 1 degree about every 4 minutes, the Moon crosses our celestial meridian about 13.2 x 4 = 52.8 minutes later each day.

"Neither the Sun reaches the Moon nor the night comes before morning. All of them (Sun and Moon) goes on different orbits."

(Qur'an, 36:40)

It is written in Qur'an that always morning comes before night. The Holy Qur'an wants to say us that Earth turns from West to East. In addition The Holy Qur'an says Sun and Moon goes on different orbits.

(37:6) OUR GALAXY - THE LOWEST HEAVEN

Our own Galaxy - the Milky Way.

Our galaxy consists of about 200 billion stars, with our Sun being a fairly typical specimen. It is a fairly large spiral galaxy and it has three main components: a *disk*, in which the solar system resides, a central *bulge* at the core, and an all encompassing *halo*.

The spiral galaxy M83 which is believed to be similar in size and shape to the Milky Way (AAO)

Disk: The disk of the Milky Way has four spiral arms and it is approximately 300pc thick and 30kpc in diameter. It is made up predominantly of Population I stars which tend to be blue and are reasonably young, spanning an age range between a million and ten billion years.

Bulge: The bulge, at the center of the galaxy, is a flattened spheroid of dimension 1kpc by 6kpc. This is a high-density region where Population II stars predominate-stars which tend toward red and are very old, about 10 billion years. There is growing evidence for a very massive black hole at its center.

Halo: The halo, which is a diffuse spherical region, surrounds the disk. It has a low density of old stars mainly in globular clusters (these consist of between 10,000 - 1,000,000 stars). The halo is believed to be composed mainly of dark matter, which may extend well beyond the edge of the disk.

(37:6) PLANETS

"WE have adorned the lowest heaven with an adornment of the planets."

(Qur'an, 37:6)

How did Mohammad (pbuh) know about the 20th century scientific fact of the Planets existence? People used to refer to the planets as big stars, and they actually gave them names. But the Qur'an clearly separates Stars from Planets.

(39:5) THE SPINNING OF THE EARTH

The Spinning of the earth is also mentioned in the Qur'an:

"He (God) coils the night onto the day and coils the day onto the night."

(Qur'an, 39:5)

The use of the word "coils" was once thought to be a purely poetic one, but today's astronomical knowledge confirms that the word "coils" is scientifically very accurate in describing the spinning movement of the earth.

(39:6) LAYERS OF THE WOMB

Common sense dictates that when you envelope an object by placing it inside a containment, it becomes relatively dark inside the containment, then if this contained object is placed further inside two more layers it will become even more dark inside.

This verse requires extremely delicate interpretation as follows:

"(God) fashions you inside the bodies of your mothers, formation after formation, in three (veils of) darkness." (zulumat)

(Qur'an, 39:6)

Modern interpreters of the Qur'an see in this verse the three anatomical layers that protect the infant during gestation: the abdominal wall, the uterus itself, and the surroundings of the fetus (placenta, embryonic membranes, amniotic fluid).

We are obliged to quote this verse for the sake of completeness; the interpretation given here does not seem to be disputable from an anatomical point of view but is this what the text of the Qur'an really means?

(39:67) GOD'S GREATNESS

We learn from Verse 39:67 that God's greatness is far beyond human comprehension - the verse states that all seven universes are "folded within God's hand."

Supported by the Qur'an's formidable mathematical code, we are taught that our universe is the smallest and innermost of seven universes (41:12, 55:33, 67:5, & 72:8-12). Meanwhile, our scientific advances have shown us that our galaxy, the Milky Way, is 100,000 light years across, and that our universe contains a billion such galaxies and a billion trillion stars, plus countless decillions of heavenly bodies. Our universe is estimated to span distances in excess of 20,000,000,000 light years.

Count the Stars!

If we take only a quintillion [1,000,000,000,000,000,000] of the stars and simply count them [from zero to quintillion] one count per second, day and night, this will take 32 billion years (more than the age of the universe). That is how long it will take to just "count" them; but God "created" them. Such is the greatness of God.

We can appreciate the vastness of our universe if we imagine going on a space odyssey. When we leave the planet Earth towards the sun, at the speed of light, we reach the sun after 93,000,000 miles and eight minutes. It will take us more than 50,000 years at the speed of light to exit our galaxy. From the outer limit of the Milky Way, our planet Earth is invisible. Not even the most powerful telescope can detect our tiny "Earth."

We have to spend more than 2,000,000 years at the speed of light to reach our next-door galaxy. At least 10,000,000,000 years, at the speed of light, must be spent to reach the outer limit of our universe. From the outer limit of our universe, even the Milky Way is like a speck of dust in a large room.

The second universe surrounds our universe. The third universe is larger than the second, and so on. More accurately, our universe should be considered the seventh universe, surrounded by the sixth universe, which is surrounded by the fifth universe, and so on. Can you imagine the vastness of the first, outermost universe? No number exists to describe the circumference of the first universe. This incomprehensible vastness is "within the fist of God's hand." From the outer limit of the outermost universe, where is the planet Earth? How significant is it? On the infinitesimal mote

called Earth, such minuscule creatures as Mary, Jesus, and Muhammad lived. Yet, some people set up these powerless humans as gods!

God's greatness is represented not only by the fact that He holds the seven universes in His hand, but also by the fact that He fully controls every atom, even subatomic components, everywhere in the greater universe (6:59, 10:61, & 34:3).

(39:68) BLACK HOLES

The existence of black holes is eventually hinted in the next verses of The Holy Qur'an: 6:73, 18:99, 20:102, 23:101, 27:87, 36:51, 39:68, 69:13,14,15, 84:1,3,4.

Verses in the Qur'an talking about the "trumpet blown" (blowing in the SUUR) is an far innuendo of a matter being sucked in the black hole and its falling into the singularity. Suur means horn or trumpet, and it resembles to the theories of black holes shapes. Qur'an uses this word when talking about the day of destruction and resurrection.

"And the Suur shall be blown, when lo! from their graves they shall hasten on to their Lord."

(Qur'an, 36:51)

"And the Suur is blown, and all who are in the heavens and all who are in the earth swoon away, save him whom Allah willeth. Then it is blown a second time, and behold them standing waiting!"

(Qur'an, 39:68)

It is now believed that at the center of each galaxy there is a super-massive black hole that is millions to billions of times heavier than our sun. The massive black hole captures nearby stars and drags them into a swirling accretion disk. A "torus" in the inner accretion shields the black hole in those systems that are viewed edge on (which is probably the case for our galactic center). In many of these systems (which are called AGN = active galactic nucleus), a jet is ejected perpendicular to the disk and is seen in the optical and radio wavebands. In the very central regions the disk becomes so hot (tens of millions of degrees) that the emission is in the X-ray and Gamma ray bands.

Anatomy of a Black Hole.

By definition a black hole is a region where matter collapses to infinite density, and where, as a result, the curvature of space-time is extreme. Moreover, the intense gravitational field of the black hole prevents any light or other electromagnetic radiation from escaping. But where lies the "point of no return" at which any matter or energy is doomed to disappear from the visible universe?

The Event Horizon.

Applying the Einstein Field Equations to collapsing stars, German astrophysicist deduced the critical radius for a given mass at which matter would collapse into an infinitely dense state known as a singularity. For a black hole whose mass equals 10 suns, this radius is about 30 kilometers, which translates into a critical circumference of 189 kilometers.

Behind this horizon, the inward pull of gravity is overwhelming and no information about the black hole's interior can escape to the outer universe.

Falling into the Singularity of Black Hole.

"And when the Suur is blown with a single blast,

And the earth and the mountains are borne away and crushed with a single crushing.

Then, on that day will the Event befall."

(Qur'an, 69:13,14,15)

At the center of a black hole lies the singularity, where matter is crushed to infinite density, the pull of gravity is infinitely strong, and space-time has infinite curvature. Here it's no longer meaningful to speak of space and time, much less space-time. Jumbled up at the singularity, space and time cease to exist, as we know them.

What happens when falling into Black Hole?

Verses that hint stretching of matter (Earth, star or gaseous material) towards Event Horizon and falling into abyss of the black hole are the next:

"When the sky is rent asunder,

And when the earth is stretched,

And casts forth what is in it and becomes empty."

(Qur'an, 84:1,3,4)

Get too close though and strange things start happening. Space gets stretched longer and skinnier. You would find your feet being pulled miles away in front of you while your body is squeezed sideways. You will have become a piece of space spaghetti long before you reach the event horizon. Then you'd be ruptured into your own fundamental particles and disappear behind the veil of darkness.

Spinning and Pulsating Black Holes

Spinning Black Holes. The effect of a black hole spinning is to create a swirl in space. The spinning action also has an effect on the horizon shape of the hole. Black Holes that do not spin are spherical, a spinning hole bulges at its horizon. There is a limitation as to the speed at which a black hole can spin. For a black hole of one solar mass, with a circumference of 18.5 kilometers the maximum spin rate is calculated as 0.000062 of a second per revolution. This gives a spin speed of about 299,800 kilometers/second, close to the speed of light.

Pulsating Black Holes. When a black hole is viewed from outside its horizon it can be seen as a space-time curvature, with ripples of space time-time bouncing about. This give rise to the view that it is the spinning black hole itself, which pulsates. Subsequent calculations by Teukolsky developed a set of equations to analyze black hole pulsations.

Black Hole lifespans

With a black hole equivalent to two solar masses, emitting particles, increasing its temperature and gravity and reducing in mass, a calculated lifespan of: 12,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000,000 ,000,000,000 years that is 1.2x10^67 years could be expected.

Holes with a larger mass will have an even longer lifespan as the larger the hole the lower its temperature and surface gravity and therefore the more weakly it emits particles.

How Can We See Black Holes?

Though we cannot "see" a black hole itself (since not even light can escape the hole's gravitational field), we may see the hole's effects on nearby matter. For example, if gas from a nearby star were sucked towards the black hole, the intense gravitational energy would heat the gas to millions of degrees. The resulting X-ray emissions could point to the presence of the black hole.

Or, if a massive black hole were surrounded by large amounts of orbiting material - gas, dust, even stars - their rapid motion close to the hole could be observable via shifts in the energy of the radiation they emit. Evidence along these lines is mounting, suggesting that black holes may not be that rare in the universe.

(40:15) POSSESSOR OF THE HIGHEST DEGREES

God Almighty put His Mathematical Miracle for His true believers to see and to assure them that Qur'an is His word. God provided us with multiple miracles within the mathematical miracle itself. Here is one simple miracle that is a strong proof of the total control of God almighty on every letter and word in his book that he called the best hadith.

ONLY ONCE in the whole book that has 114 suras and 6346 verses did God Almighty choose to call Himself, "Possessor of the HIGHEST degrees" Actually the whole verse goes like this;

"(God) Possessor of the highest degrees, and Ruler of the whole dominion. He sends inspiration, bearing His commands, to whomever He chooses from among His servants, to warn about the Day of Summoning."

(Qur'an, 40:15)

The expression "Possessor of the highest degrees" is ***"Rafii Al-Daragat"***, in Arabic the word Daragat=degrees. Guess which is the highest degree this is ? It is the "Rafii", where Rafii in Arabic = the Highest in English. Is it then a coincident that the geometrical (numerical) value of the word RAFII in Arabic = 360. This means God is the possessor of the highest degrees, the 360 degrees. No higher degree than this.

Does this tell you something? God the possessor of the highest degree (i.e. 360) is in control of every letter and word in His book. Where the numerical value of the word Rafii comes from? The word Rafii is an Arabic word with 4 letters, Raa, Faa, Yaa, and Ain.

Here are the numerical value of the letters of Rafii, Raa= 200, Faa=80, Yaa=10, and Ain= 70. The whole word adds to 200+80+10+70=360

God Almighty who controls the whole universe got all the knowledge. God Almighty is the author of the Qur'an. Now you may understand the names that God gave Himself in these verses;

"He (GOD) is the Alpha, and the Omega. He is the Outermost, and the Innermost. He is fully aware of all things."

(Qur'an, 57:3)

He is surrounding everything *(Muheett)*, He possesses the Highest Degree. Glorified, the One God, there is no gods besides Him.

(41:10) HOW OLD IS THE EARTH?

The Bible provides a chronology of history that extends back to the creation of Adam and Eve and to the creation of the earth. From this chronology it is possible to determine the date of the creation and hence the age of the earth.

Archbishop Ussher of Armagh (1581-1657) had calculated the year of creation to be 4004 BC. If that was not precise enough, Dr. Lightfoot of Cambridge worked out that the exact time when God completed His creation was 9 a.m. on Friday, October 23, 4004 BC.

Many religious groups and sects have used this date in predicting precise dates for the end of the world, but all such predictions have so far proved erroneous. The one fact against them is that the world is still intact and we are very much alive. One reason al1 of those predictions failed is that they are calculated from a false date of creation. If 4004 BC was the year of creation, that would make the earth less than six thousand years old.

No scientist can accept this today.

Modern scientists estimate that the earth is 4.5 billion years old with a maximum error of 2.2 %. Knowing this, many educated people lost faith in religion. (Judaism & Christianity). They naturally felt that the Word of God should not contain errors of this kind. Others maintain that the Word of God was meant to teach only that truth which God wanted put into the scriptures for our salvation. As the scientist Galileo put it, the Bible is there to teach people how to go to heaven; it is not there to teach people how the heavens go. Some maintain, therefore, that it is understandable that the book will contain some historical and scientific errors since it was written by human beings who lived a long time ago and did not share our modern knowledge. (The Qur'an completely refutes this idea. The Qur'an does not contain any scientifical mistakes like the Bible does. Did man write the Bible or God? If not God than why do they say the Holy Bible is the Word of God). The Qur'an, on the other hand, does not contain any historical or scientific or any kind of error. God challenges us to test this claim by examining the book for ourselves (see Qur'an 4:82).

The Qur'an does not repeat the incorrect biblical chronology we have seen above. The Qur'an does not give a chronology since its purpose is not to provide us with the details of history, but only to teach us the lessons arising from specific events in history.

The Qur'an does, however tell us that God measured the sustenance of the earth in four periods (Qur'an 41 :10). As to what could be the significance of these four periods, thay could be the four geological periods described by modern science, with man's appearance, as we already know, taking place in the quaternary era. This is purely a hypothesis since nobody has an answer to this question. How did the author of the Qur'an avoid the mistake in chronology committed by so many others, and believed in by so many others even up to our present day? Could a man in the seventh century have known that the earth was much more than six thousand years old? How could he come by this modern knowledge unless God was revealing knowledge to him?

God tells us that the Qur'an is His book and not the work of any man (see Qur'an, 10:37).

(41:11) THE GASEOUS UNIVERSE

The Koran mentions that the universe originated from a "gaseous material." (Koran, 41:11). It uses the Arabic word ***dukhan,*** which stands for smoke. A perfect analogy for gas and particles in suspension and the gasses being hot.

Scientists have only very recently confirmed that the universe did indeed originate from a gaseous mass composed of hydrogen and helium, a big mass of hot gasses, a mass over 300,000 times that of the earth. That mass then fragmented to form galaxies.

The subsequent history of the Big Bang saw the Americans George Gamow, Ralph Alpher and Robert Horman indicate that the whole event took place at a very high temperature; it was a hot Big Bang.

This view has been confirmed by the later discovery of the background microwave radiation. The eventual formation of galaxies resulted as a condensation, under gravitational pull, of hot gases, which was mainly Hydrogen, but may also have contained Helium and a few other light elements as well. Over the ages, and with the formation of galaxies, the gas has gradually condensed into individual stars. The universe in its very early stages was, thus, still in the form of hot gases which is mentioned in the Qur'an in the following verse:

"Then He took hold of the sky when it was smoke."

(Qur'an, 41:11)

Note that the verse did not say clouds or gas, but smoke, which is a very accurate description as smoke is hot gas, whilst clouds are cold.

Once these stars were formed a system had to be devised to govern their motion. The kinetic energy stored in the foreword movement of these bodies could not be relied upon on its own, otherwise stars and also planets would have shot off in straight lines dispersing into space. No planet would ever revolve around its mother star, which also applies to earth and, thus, life would not have evolved on earth, because the whole of life on earth is so dependent on the sun.

(41:12) THE LOWEST HEAVEN

Our universe, as we know it today, includes within it all the stars and galaxies that we have detected in the sky so far. If multiple universes exist, they lie outside and beyond all these galaxies. That, too, seems to be in accordance with the information given in the Qur'an:

"And we have decorated the lowest heaven (universe) with lanterns (stars)."

(Qur'an, 41:12)

It is worth mentioning here the suggestion put forward by some Muslim interpreters concerning the boundaries that lie between the multiple universes and that are spoken of in the Qur'an. What they suggested is that the region beyond the Earth's atmosphere up till the moon forms the second universe, while the solar system constitutes the third universe and so on. They add that when man landed on the moon, he has actually moved into a higher universe.

However, and if we quote the previous verse which clearly states that all the lanterns (stars) are to be found in the lowest universe, we can quickly dismiss the previous interpretation. If the lowest universe includes within it all the stars and galaxies that we know, then the next universe must lie outside the comprehension of mankind, if anything that speaks much more favorably of the capacity of God's creation than if the different universes where all too tangible.

(41:12) THE COSMIC CONSTANTS

There are no natural and sufficient reasons why all of the universes constants have the values they have. If they had different values, life would cease to exist. However they have the values they have regardless of any physical necessity if we take God out of the picture. Examples like, the Planck's constant, the speed of light, the electron charge, and the gravitational constant. These constants with the exception of the gravitational constant have not varied more than one percent since the start of the universe and are same throughout. The gravitational constant has varied around ten percent.

It should be noted at this point that these constants have been there since the beginning of the universe, a time before life appeared. These and other strange laws of nature defy any natural and sufficient reasons for their existence the only valid explanation left is that an intelligent designer set them:

"... The measuring of the Mighty (God), the Knower."

(Qur'an, 41:12)

According to the principle of sufficient reason stated by G.W. Leibniz, "No fact can be real or existing and no statement true unless there is a SUFFICIENT reason why anything is the way it is and not otherwise."

"Do they [the disbelievers] not see that god has subjected for them whatsoever is in the heavens and the earth....".

(Qur'an, 31:20)

INDEED ALL THE CONSTANTS IN THE HEAVENS AND EARTH HAVE BEEN SUBJECTED TO MAKE SURE THAT LIFE AND HUMANITY CAME TO BE. A FACT, GIVEN THE EVIDENCE.

THERE IS NO REASON AS TO WHY THE CONSTANTS HAVE THEY VALUES THEY HAVE, EXCEPT THAT THEY HAVE BEEN SET BY INTELLIGENCE WITH A PURPOSE AND END IN MIND!

THEY HAVE BEEN ***SUBJECTED*** ***TO MAKE SURE THAT THE UNIVERSE EVOLVED THE WAY IT DID AND LIFE AND HUMANITY CAME TO BE!***

Whereas scientists face an enigma here, which threatens the edifice of their work, the followers of the Koran face no such enigma at all. God is the sufficient reason.

(41:53) HORIZONS

"Soon WE will show them Our Signs in farthest regions of the earth and in them selves until it becomes manifest to them that it is the truth. It is not enough that thy Lord is Witness over all things? "

(Qur'an, 41:53)

In this verse, Allah (swt) is telling us that He will show us His wonders in our selves and in the horizons. In our selves is best to describe our bodies and the way we function. The human body is a sophisticated machine.

It contains hundreds of organs, bones, and veins that keep us a live. Also, Allah is showing us his wonders especially in the Space.

(42:29) LIFE ON OTHER PLANETS

"And among HIS signs is the creation of the Heavens and the earth, and of whatever living creatures HE has spread forth in both. And HE has the power to gather them together whenever HE pleases."

(Qur'an, 42:29)

How did Mohammad (pbuh) know about the 20th century notion that life could possibly exist on other planets? Why would Mohammad (pbuh) even bring up such subject?

(46:15) THE FULL MATURITY OF MAN

The Koran mentions that a human being reaches full maturity at age forty (Koran, 46:15). This is a very unusual statement. Even today most people believe that full maturity is reached at puberty and State and Federal laws put it between 18-22 usually. However, the Koran is scientifically correct where even modern laws are wrong. If we analyze the statement psychologically and physiologically, what we find is that the "overall quantity of stored knowledge in the mind of an individual reaches a peak at age thirty-nine and after that it gradually declines."

"We have charged man(kind) that he/she be kind to his/her parents; his bearing and his weaning are thirty months. Then when he is fully developed and reaches FORTY YEARS."

(Qur'an, 46:15)

Psychological tests show that the overall quantity of stored knowledge in a person's mind increases during the first 39 years of his life, reaching a peak at this time. The Koran said 40 years much before such psychological tests were conducted.

While commenting on the above verses of the Koran, please consider the fact that the Koran was revealed at a time period and place where people had little, if any scientific knowledge and lacked the equipment to provide such accurate descriptions contained in the above verses. As no alternative explanation is found, the "revealed" nature of the above verses is made clear.

The Koran claims to be a revelation from God.

(47:15) THERMAL RECEPTORS IN BOWELS

"Verily, the tree of zaqqum will be the food of the sinners, like boiling oil it will boil in their bellies, like the boiling of scalding water. "

(Qur'an, 44:43-45)

"Like those who abide in the Fire and who are given boiling water to drink so that it tears their bowels."

(Qur'an, 47:15)

Bowels and punishment on the Day of Judgment.

Anatomical studies recently discovered that the bowel is composed of 3 main layers. The outer layer (serrous membrane) which is a thin membrane, damp with its serum secretion, the mid layer (the musculosa) and the inner layer which is the mucosal membrane is subdivided into several layers.

In this complex structure we see the Divine Wisdom in creation which has made the inner part of the intestine secure of any external effects that may cause pain such as heat sensation. As for the abdominal cavity it is lined with the peritoneum which reaches 20,400 cm^3 , which is equivalent to the outer skin in size. The pain receptor and other sensory units in the intestine are similar to that present in the skin, with the difference only in distribution.

As for the bowel, it has but a few sensory nerves for heat and touch. That is why if the abdominal lining is anaesthetized with local anesthetic and the abdomen is opened, the intestine held or even cut, this would not cause any pain, but when the bowels are torn apart due to drinking extremely hot water that penetrates into the inner cavity surrounding the bowels (peritoneum), which is rich in sensitive nerves, torment reaches its peak. So, the reason for tearing the bowel apart is to get to the outer peritoneum layer which has the sensory nerve supply.

Scientific signs in the verses:

Allah has made it clear in the above mentioned verses, that the skin is the location for pain and punishment. It is also the means for making non-believers feel the punishment of Hell-fire

"As often as their skins are roasted through, We shall change them for other skins that they may taste the punishment. ", when this skin is consumed by fire it loses its function, and pain sensation disappears. So it is replaced with a new skin with all its function. It has now been proven by modern science, that the skin has nerve endings which are the centers for pain and heat sensation which when burnt, as in the case of third degree burns, cause the vanishing of pain sensation.

Science also discovered that these nerve endings are only present in high concentration, in the skin. This fact was only known after the invention of the microscope and the development of Anatomy. However, the Qur'an pointed to this fact 14 centuries ago.

As for the threatening of the non-believers with extremely hot water, "and be given to drink (the nonbelievers)boiling water so that it cuts their bowels " the reason is now known due to the progress of modern science, that the bowels are not affected by heat, but if they are torn, the hot water would come out to the peritoneum which is provided with the sensory nerve supply equivalent to that of the skin.

Torturing through the skin, is different due to the different structure of the skin, so the feeling of pain would not occur when the skin is consumed and totally burnt, except when being renewed.

These facts discovered by modern science were mentioned in the Qur'an 14 centuries ago because the Qur'an is the word of Allah, the Only Creator, The Knowing who knows all the secrets of the structure of man.

(50:16) THE SPACELESSNESS OF GOD

Very important reality mentioned in the Qur'an is unveiled: the fact that

"Allah is nearer to man than his jugular vein"
(Qur'an, 50:16)

As everybody knows, the jugular vein is inside the body. What could be nearer to a person than his inside? This situation can be easily explained by the reality of spacelessness. This verse can also be much better comprehended by understanding this secret.

As explained before, the only absolute being is Allah. All other things are but the reflections of Allah in the form of shadow beings. Allah sees and knows man with the five senses and with all other senses. Whithersoever we turn, there is the presence of Allah.

As may be clearly seen, the great secret revealed in this book is the key to all things. As Lincoln Barnett stated, this is the reason for the fears of materialists. The primitiveness of their own philosophy and the ignorance of their point of view are bared for all to see. They are also aware that if people know the true nature of matter in general, there will be no ground left on which they can rationalize their views. There can be no other explanation for the extreme panic and opposition that they display about such a certain fact.

The issues discussed in this chapter, namely the truth underlying matter, timelessness, and spacelessness, are indeed extremely clear. As expressed before, these are absolutely not any sort of a philosophy or a way of thought, but crystal-clear truths impossible to deny. In addition to its being a technical reality, the rational and logical evidence also admits no other alternatives on this issue: the universe is an illusory entirety with all the matter composing it and all the people living on it. It is a collection of perceptions.

Materialists have a hard time in understanding this issue. For instance, if we return to Politzer's bus example: although Politzer technically knew that he could not step out of his perceptions he could only admit it for certain cases. That is, for Politzer, events take place in the brain until the bus crash, but as soon as the bus crash takes place, things go out of the brain and gain a physical reality. The logical defect at this point is very clear: Politzer has made the same mistake as the materialist philosopher Johnson who said "I hit the stone, my foot hurts, therefore it exists" and could not understand that the shock felt after bus impact was in fact a mere perception as well.

However, being unbiased would be enough to understand this subject. Lincoln Barnett informs that this subject was "discerned" by some scientists:

Along with philosophers' reduction of all objective reality to a shadow-world of perceptions, scientists have become aware of the alarming limitations of man's senses.

These statements point at a very important fact: matter's lack of any physical reality alarms materialists who hold matter to be an absolute thing. For true believers, the case is just the opposite: people of faith become very glad when they have perceived the true nature of the world because this reality is the key to all questions. With this key,

all secrets are unlocked. One comes to easily understand many issues that he previously had difficulty in understanding.

As said before, the questions of death, paradise, hell, the hereafter, changing dimensions, and human such as "Where is Allah?", "What was before Allah?", "Who created Allah?" "How long will the life in cemetery last?" "Where are heaven and hell?", and "Where do heaven and hell currently exist?" will be easily answered because it will be understood with what kind of a system Allah created the entire universe from nothingness. So much so that, with this secret, the questions of "when", and "where" become meaningless because there will be no time and no place left.

When spacelessness is comprehended, it will be understood that hell, heaven and earth are all actually at the same place. If timelessness is understood, it will be understood that everything takes place at a single moment: nothing is waited for and time does not go by, because everything has already happened and finished.

(50:19,20) THERE IS NO PERCEPTION OF TIME in the grave

In the Qur'an the soul is compared to consciousness and death is compared to sleep. Once death overcomes us there is no perception of passage of time and next thing we would see will be the Day of Judgment.

"And agony of death comes in truth. This is what you wished to avoid. And the trumpet is blown. This is the threatened Day."

(Qur'an, 50:19-20)

"And on the Day when the Hour arrives the guilty will swear that they remained (dead) but for an hour, thus they were ever deceived. But to those to whom knowledge and faith are given will say: "The truth is that you have remained (dead) until the Day of Resurrection by Allah's decree. This is the Day of Resurrection, but you used not to know."

(Qur'an, 30:55-56)

On that Day, when the real truth will become apparent to every one, those who disbelieved will be regretful and full of remorse. They would wish that they had never existed; but then, there would be no room for a second chance on the Day of Judgment.

"And to Allah belongs the Sovereignty of heavens and the earth On the Day when the Hour rises, those who follow falsehood will be lost."

(Qur'an, 45:27)

(51:38) RULER AND PHARAOH

"And the King said to his courtiers, `I see in a dream seven fat kine which seven lean ones were eating, and seven green ears of corn and seven others withered. O ye chiefs, explain to me the meaning of my dream if you can interpret dreams."

(Qur'an, 12:43)

"And in the story of Moses also there was a Sign when WE sent him to Pharaoh with clear authority. "

(Qur'an, 51:38)

In the above verses, the Qur'an describes the ruler of Egypt being addressed as "King" in the time of Joseph, whilst Moses addresses the ruler as "Pharaoh". This is a small but telling accuracy, for in the time of Joseph the rulers were from the Hykos Dynasty, and were Semites. They did not refer to themselves as "Pharaohs".

The term was used by the native Egyptian dynasties that supplanted the Hykos, in the time of Moses. The Bible again proves inaccurate on this point referring to both as "Pharaoh". The Qur'an also correctly describes aspects of the ancient Egyptian religion, in particular the worship of Pharaoh as a god.

(51:47) THE EXPANSION OF THE UNIVERSE

The Koran talks about a universe that is continually "expanding" (Qur'an, 51:47). The concept of an expanding universe is very popular with scientists today, however no one knew of it until recently. Do you know that the universe is expanding?

The Universe has been expanding since its creation. Hubble, an astronomer made this great discovery, in the early part of this century. It was also predicted by the Einstein's theory of "General Relativity."

Can you feel or see it expanding? No, the verification of this requires specialized knowledge and instruments, which no one at the time of Muhammad had access to. The Koran states: And the sky we built it with might and We cause the 'expansion' of it (Koran, 51:47). In 1965, a very important discovery was made, and that was the background radiation, which supported the Big Bang theory. But, the Big Bang theory, together with the detection of the red shift in the spectrum of far away galaxies gave birth to yet a new concept and that was the universe is expanding.

When analyzing the light we receive from distant galaxies it was found that they all had a red shift meaning that they were flying away from us. That contribution of the red shift analysis meant that the universe is indeed expanding.

This conclusion is literally mentioned in the Qur'an:

"And the heavens we created with might (power) and we are expanding it."

(Qur'an, 51:47)

Note that the word "expanding" is used in the present tense and not in the past which again is in agreement with the fact that the expansion of the universe is a continuous process.

The expansion of the Universe is the most imposing discovery of modern science. Today it is a firmly established concept and the only debate centers around the way this is taking place.

It was first suggested by the general theory of relativity and is backed up by physics in the examination of the galactic spectrum; the regular movement towards the red section of their spectrum may be explained by the distancing of one galaxy from another. Thus the size of the Universe is probably constantly increasing and this increase will become bigger the further away the galaxies are from us. The speeds at which these celestial bodies are moving may, in the course of this perpetual expansion, go from fractions of the speed of light to speeds faster than this.

'Heaven' is the translation of the word *sama'* and this is exactly the extra-terrestrial world that is meant.

'We are expanding it' is the translation of the plural present participle musi'una of the verb ausa'a meaning 'to make wider, more spacious, to extend, to expand'.

Ramidullah in his translation of the Qur'an talks of the widening of the heavens and space, but he includes a question mark. There are those who arm themselves with authorized scientific opinion in their commentaries and give the meaning stated here. This is true in the case of the Muntakab, a book of commentaries edited by the Supreme Council for Islamic Affairs, Cairo. It refers to the expansion of the Universe in totally unambiguous terms.

(51:47) THE EVOLUTION OF UNIVERSE

Allah Almighty has in concise verses answered questions that it has taken some of the greatest physicists and astronomers of history centuries to answer. It was only in this century that they finally found the truth.

Mankind has studied the heavens and the earth for countless centuries. The Greeks were some of the first people to attempt to describe various cosmological phenomena. They gave us many of the very first theories regarding the universe and it's composition. The major contribution came with the writings of Plato. Plato claimed that the universe was created by what he called "The Demiurge." According to Plato, the universe was the result of reasoning and planning; it was constructed by the Demiurge upon precise mathematical and geometrical principles. Later on, Aristotle, Plato's student, adopted his teacher's basic concept. Aristotelian cosmology was based on the concept of an enclosed cosmos comprising a series of concentric spheres revolving around a

stationary Earth. Motion was provided by the *"prime mover"* and, once initiated, would remain circular, uniform and eternal.

Both Plato and Aristotle taught that the universe was eternal, with neither beginning nor end. The universe as a whole was considered steady and unmoving, and this was the basis for the later formation of the *"steady state theory."* In 1915, Albert Einstein had published the famous general theory of relativity. Soon afterward he proposed a static model of the universe, but he would later declare that it was *"one of the greatest mistakes of my career."* Why? Because in 1925, Edwin Hubble (after whom the Hubble Space telescope is named) provided the observational evidence for the expansion of the universe, or as Stephen Hawking put it *"The universe is not static, as had previously been thought, it was expanding."*

Although mankind did not discover these facts till this 20th Century, still, we find that Allah Almighty had provided the answers for mankind 1400 years ago in the Qur'an through the agency of His illiterate Prophet Muhammad (pbuh). During Muhammad's (pbuh) time, the Greeks were claiming that the cosmos was static and not expanding. So how did he know that the universe was expanding 1300 years before the foremost scientist of the West proved this to be a scientific fact?

However, this is not the only claim that the Qur'an makes with regard to the universe. Let us study the next verses:

"Then He settled/equilibrated unto the firmament (sky) when it was smoke and said unto it and to the earth: come willingly or unwillingly. They said: we come willingly"

(Qur'an, 41:11)

"Do not the disbelievers see that the heavens and the earth were fused then We ripped them asunder, and We created from water every living thing, do they not believe?"

(Qur'an, 21:30)

"And the firmament (sky) We constructed with power and skill and verily We are expanding it."

(Qur'an, 51:47)

At the present time, the Big Bang theory of the origin of the universe is the cosmological model most widely accepted by astronomers. It holds that about 20,000,000,000 years ago the universe began with the explosive expansion of a single, extremely condensed state of matter (*"the heavens and the earth were fused then we ripped them asunder"*).

As mentioned above, a further development of this model, known as *"inflationary theory,"* describes the original condensed matter as arising from virtually empty space. It was only after the development of radio telescopes in 1937 AD that the necessary observational precision was achieved in order for astronomers to arrive at the above conclusion. Out of the observations of such scientists has arisen the so-called "Hubble Constant" (Ho) which is quantity currently used to gauge the *rate* at which the universe is expanding. In other words, the issue is no longer whether the universe is expanding or not, rather, it is only a question of *how fast* it is expanding.

Verses presented appear to claim that the heavens and the earth were once a single mass then were "ripped asunder." The exact root words used in the Qur'an are the words "ra-ta-qa" and "fa-ta-qa," or *"the heavens and the earth were 'ra-ta-qa' then we 'fa-ta-qa' them."*

"Ra-ta-qa" is an Arabic word, which has the general meaning of "to fuse, to sew, to mend, to patch up, to repair." ("Lisan Al-Arab," by Ibn Mandoor, Vol. 10, Dar Al-Fikr, p. 114, and also "A Dictionary of Modern Written Arabic," Hans Wehr, Librairie du Liban, p. 325)

Similarly, **"fa-ta-qa"** has the general meaning of "To rip, to undo sewing, to unstitch, to tear apart, to rend, to rip open." ("Lisan Al-Arab," by Ibn Mandoor, Vol. 10, Dar Al-Fikr, p. 296, and also "A Dictionary of Modern Written Arabic," Hans Wehr, Librairie du Liban, p. 695)

The verse then goes on to say that Allah Almighty created the heavens and the earth from a celestial "smoke." Astronomers today have pictures of galaxies being formed by exactly this process, i.e. the condensation of spiraling celestial "mists." Isn't it an incredible coincidence that an illiterate man from the desert, without the aid of observatories or satellite imaging was making these claims over 1400 years ago? Was he just guessing?

Further, the cosmic phenomenon depicted in the following two figures are commonly referred to by astronomers as a cosmic "mist." However, if we were to read the second verse of the Qur'an presented above we will find that the Qur'an more accurately refers to it as a "smoke." This is because "mist" implies a cool and tranquil spray of water. However, "smoke" implies a hot gas containing airborne particles. This is indeed another example of the literary miracle of the Qur'an in that it manages to convey to us in a very concise language a very accurate and detailed description of the topic at hand.

"And those who have been given knowledge know that that which has been revealed to you from your Lord is the Truth."

(Qur'an, 34:6)

"Do they not consider the Qur'an (with care) or are there locks upon their hearts?"

(Qur'an, 47:24)

(52:6) THE SEA SET ON FIRE

"Wal bahril masjur."

(Qur'an, 47:24)

In surat At-Tur (Q 52:6), Allah (swt) swears on oath:

"Wal bahril masjur", "By the sea set on fire." Water and fire are incompatible, water quenches fire and fire causes water to evaporate and it is virtually impossible to

have water and fire in one place. Therefore, early commentators on Qur'an thought in the first instance that the verse probably is referring to akhirah, the last hour, because there is another verse which says: "Waithal - Biharu -sujjirat" translated as:

"When the seas will be set on fire". But the context of the oath in surat At-Tur is in relation to things that exist in our present day life. They immediately said that it could not refer to akhirah, and has to refer to our worldly life. They then staffed looking for another meaning for the word masjur, other than "set to fire". They found in the Arabic language that some of the meanings of "sajjara" means "mala-a wa kaffaa" (it has been filled with water and kept from transgressing on land).

This is true because we have many instances iii the history of our planet when the seas encroached more on land than they do today. We also know that the maximum amount of fresh water on land is stored in the form of ice caps in the two poles as well as at the peaks of high mountains.

This massive amount of fresh water does not need more than 4-5 degrees Celsius to melt and 4-5 degrees are nothing in the climatic changes of our planet. If these ice caps were made to melt this can raise the water level of seas and oceans by 100 meters or so and would be more than enough to drown most of the present day civilizations, which lie very close to shorelines. The commentators thus said that the meaning of "al bahril masjur" is not "the sea set on fire" but "the sea that is filled with water and stopped from transgressing on land".

This is correct, but when the scientists went down to study the mid-oceanic ridges they found that they are all composed of volcanic rocks. They also found that the network of fault lines that traverse the planet actually ooze magma at temperatures that exceed 1000 degrees Celsius resulting in seas and oceans that are actually set on fire. Water boiling to superheated steam at temperatures of 200 degree Celsius or more. This is a fact that came to our knowledge only in the late 60's of this century.

(53:45,46) EMBRYONIC SEX DETERMINATION

The Husband Determines the Baby's Gender.

The Koran says that the "ejaculated drop" determines the sex of a human baby. It is common knowledge that semen is the fluid that is ejaculated by males during sexual acts. Females do not possess such "ejaculated semen."

The point is that the sex of the baby, whether it be male or female, will indeed be determined by the 'ejaculated drop', i.e. the father's sperm. It has been scientifically established only recently that the female ovum contains only X-chromosomes. If the ejaculated drop bears the Y chromosome, the offspring will be male, otherwise the offspring will be female. No one living at the time of Muhammed or even Darwin for that matter had any knowledge of such genetics foretold centuries before in the Koran.

"And He (Allah) created the two pairs, male and female, from a drop that is ejaculated."

(Qur'an, 53:45,46)

We know in this day and age that the sex of the newborn is determined by a sperm (ejaculated drop), which fertilizes the ovum. If a sperm carrying an X chromosome fertilizes the ovum (which always carries XX), the off spring will be a girl. If the sperm carrying an Y chromosome fertilizes the egg, the offspring will be a boy. The Koran stated this fact long before anyone knew anything about chromosomes and sex determination.

(53:45,47) PAIRS OF EVERYTHING

" And that HE creates the pairs, male and female, From a sperm drop when it is emitted; And that it is for him to bring forth the second creation."

(Qur'an, 53:45-47)

How did Mohammad (pbuh) know about the 20th century scientific fact of pairs? Allah says that he created everything in pairs like male and female, positive and negative, day and night, hot and cold.

(53:49) SIRIUS - A DOG STAR

"And that He it is Who is the Lord of Sirius."

(Qur'an, 53:49)

Sirius is a remarkable star, it is not one of the Galaxy's most luminous stars but appears so bright owing to its relatively close distance of 8.7 light-years (on the order of 80 million million km) - hence one of the Sun's neighbors. It is twice the size of the Sun and shines some 23 time brighter. Sirius is accompanied by a much fainter smaller star known as Sirius B - or the 'Pup'. Too faint to be seen without moderate sized telescopes, Sirius B is a prime example of a 'white dwarf' star - a tiny, incredibly dense object (a tablespoon full of this matter would weigh 2.5 tons!) approximately 32,000 km in diameter.

Sirius (translated from Greek) means 'scorching' or 'sparkling' and its easy to see why. From northern latitudes the star does not rise particularly high. Its light therefore has to travel though a thicker portion of atmosphere to reach us, in comparison to a star that is directly overhead. Even on the calmest of winter evenings the Earth's atmosphere is turbulent - wobbling and sloshing around as small regions rise and sink due to convection. Looking at Sirius you'll notice it flashing violently, often appearing to change color - white, blue, green, blue, orange and so on. This has nothing to do with the Star itself. The phenomena is known as scintillation and is result of the distortion of the star's light as it passes though the atmosphere - the lower and brighter the star, the prominent its scintillation.

(54:1) THE SPLITTING OF THE MOON

The splitting of the moon is mentioned in the Holy Qur'an, Surah Al-Qamar:

"The hour drew nigh and the moon was rent in twain.
And if they behold a portent they turn away and say:
Prolonged illusion.
They denied (the Truth) and followed their own lusts.
Yet everything will come to a decision."

Qur'an (54:1-3)

According to Maududi, the traditionists and commentators have agreed that this incident took place at Mina in Makkah about five years before the Holy Prophet's Hijra (migration) to Madinah.

The Moon had split into two distinct parts in front of their very eyes. The two parts had separated and receded so much apart from each other that to the on-lookers (in Makkah) one part had appeared on one side of the mountain and the other on the other side of it. Then, in an instant the two had rejoined. This was a manifest proof of the truth that the system of the universe was neither eternal nor immortal, it could be disrupted.

Did it happen or will it happen?

Explanation No. 1: (Moon once appeared cleft asunder in Mecca).

Shaikh Abu A'la Syed al-Maududi writes in his commentary to Surah 54 - Al-Qamar:

In this Surah the disbelievers of Makkah have been warned for their stubbornness which they had adopted against the invitation of the Holy Prophet (peace and blessings of Allah be upon him). The amazing and wonderful phenomenon of the splitting of the Moon was a manifest sign of the truth that the Resurrection, of which the Holy Prophet was giving them the news, could take place and that it had approached near at hand. The great sphere of the Moon had split into two distinct parts in front of their very eyes.

The two parts had separated and receded so much apart from each other that to the on-lookers one part had appeared on one side of the mountain and the other on the other side of it. Then, in an instant the two had rejoined. This was a manifest proof of the truth that the system of the Universe was neither eternal nor immortal, it could be disrupted. Huge stars and planets could split asunder, disintegrate, collide with each other, and everything that had been depicted in the Qur'an in connection with the description of the details of Resurrection, could happen.

Explanation No. 2: (The cleaving of the moon will happen in the future).

Most of the commentators see in this verse a reference to a phenomenon said to have been witnessed by several of the Prophet's contemporaries. As described in a number of reports going back to some Companions, the moon appeared one night as if split into two distinct parts. While there is no reason to doubt the *subjective* veracity of these reports. But whatever the nature of that phenomenon, it is practically certain that the above Qur'an-verse does not refer to it but, rather, to a *future* event: namely, to what will happen when the Last Hour approaches. (The Qur'an frequently employs the past tense to denote the future, and particularly so in passages which speak of the coming of the Last Hour and of Resurrection Day; this use of the past tense is meant to stress the

certainty of the happening to which the verb relates.) Thus, Raghib* regards it as fully justifiable to interpret the phrase *inshaqqa 'l -qamar* ("the moon is split asunder") as bearing on the cosmic cataclysm - the end of the world as we know it - that will occur before the coming of Resurrection Day (see art. *shaqq* in the *Mufradat*). As mentioned by Zamakhshari,** this interpretation has the support of some of the earlier commentators; and it is, to my mind, particularly convincing in view of the juxtaposition, in the above Qur'an-verse, of the moon's "splitting asunder" and the approach of the Last Hour. (In this connection we must bear in mind the fact that none of the Qur'anic allusions to the "nearness" of the Last Hour and the Day Of Resurrection is base on the *human* concept of "time".) (Page 818).

Explanation No. 3: (The phrase "cleft asunder" is a metaphorical term)

This line of approach does not give a particular preference to any one of the above two explanations. It opens a third door.

Allah alone knows the Truth and may He forgive us for our errors.

Explanation No. 4:

The wonders of the Qur'an never finishes. Allah said in the Qur'an [41:53] 'We will show them Our Signs in the universe, and in their ownselves, until it becomes manifest to them that this (the Qur'an) is the truth. Is it not sufficient in regard to your Lord that He is a Witness over all things?'. Some one asked Prof. Zaghloul Al-Najjar about the miracle mentioned in the beginning of Sura Al-Qamar (the moon) about the split of the moon [54:1] 'The Hour has drawn near, and the moon has been cleft asunder (the people of Makkah requested Prophet Muhammad SAW to show them a miracle, so he showed them the splitting of the moon)'. The question was whether there is any scientific evidence discovered to explain the incident?

The answer was that the miracle existed only at that time for the people of Quraiesh when they challenged the prophet Muhammmad (saw) to show them a miracle, or a proof that he is the messenger of Allah. The challenge was to split the moon in to two pieces when it is full.

The incident of the splitting of the moon that has been mentioned determines its period of revelation precisely. The traditionists and commentators are agreed that this incident took place at Mina in Makkah about five years before the Holy Prophet's hijra (immigration) to Madinah (about 565 AD).

In this Sura the disbelievers of Makkah (Quriesh) have been warned about their stubbornness which they had adopted against the invitation of the Holy Prophet (peace and blessings of Allah be upon him). The prophet (PBUH) prayed to Allah to show his people this miracle that they might believe in him.

The answer of Prof. Al-Najjar was limited to this incident, but one of the audience called David Mosa Pidcook (leader on British Muslim Party) asked to comment on this question and he said: It was shown in BBC a program where there was a debate between three experts. The discussion was about if the amount of money paid by NASA to send a human to land on the surface of the moon to study the inner structure of the moon was worth it or not?? The American government authorised a budget of $100, 000, 000, 000 (one hundred thousand million dollar) for this project.

One of the discoveries of that project was that there is a layer of material that splits the moon into two halves and the only explanation to this discovery that the moon was split at some times in its history and rejoined ! (Subhan Allah)

Finally, I would like to request every one to try to order the program from the BBC and get more conformation on this subject. You have the permission to send and propagate this information to any one you like.

(55:5) THE SUN AND THE MOON PRECISELY COMPUTED

The earth, having been formed, was ordained to very precise specifications; those necessary for the development and support of life on earth. The following are examples:

1) If the size of the earth was somewhat less than it's present size, say the size of the moon, it's gravity would have been much weaker. This would result in the failure of the earth to retain it's atmosphere or water vapor, and thus no life would have been possible. If the size of the earth, on the other hand was larger than it's present size, say the size of Saturn or Jupiter, the gravity would have been too strong. This would cause the atmosphere to be compressed too much lower heights resulting in much higher air pressure. This would also abolish life on earth.

2) If the sun were closer to the earth (present distance being 93 million miles) the temperature on earth would rise sharply causing the evaporation of oceans and rivers and the extermination of all life. If the sun were much further away the earth would freeze to death.

3) If the moon were closer to the earth, the tides would rise causing gigantic waves that would destroy life on islands and coastal areas. If the moon were further away from the earth the tides would come to a standstill leading to the stagnation of seas, the result of which would be grave damage to marine life. These very precise measurements of such variables as distance, mass, speed…etc. are referred to in the following verses:

"The sun and the moon precisely computed."

(Qur'an, 55:5)

4) The earth spins on it's axis once every 24 hours. If it didn't spin, the oceans would empty all their waters and if it spun much faster it would disperse into empty space.

The spinning movement is also responsible for the night and day, without which one half of the earth would be under continuous sunlight and heat up excessively while the other half would be submerged in total darkness and freeze to death.

(55:7) PRECISE BALANCES

The 'Modern Nebular Hypothesis' like previous theories, has also faced difficulties in determining how the planets received enough angular momentum, that is, sufficient energy to set them orbiting around the sun at the speeds they do. When a

man-made satellite is placed into orbit a series of precise adjustments have to be executed in order to induce a balance between the acting forces (gravity, centrifugal force, distances, speed, etc.) This balance is essential in order to place the satellite into orbit. Without these very precise adjustments, and if the satellite is left unguided, it would either fall back to earth or be lost forever into outer space.

When we think of the orbits of the planets, the orbits of the infinite number of the stars and all the galaxies, we realize that they are all the result of immaculately precise balances. These very accurate balances are clear indications of the existence of a supreme governing power that is responsible for creating as well as sustaining the universe. The Qur'an speaks of these fine balances:

"... And the sky He raised and set the balance."

(Qur'an, 55:7)

(55:7) THINGS WERE CONTROLLED

"... And He (God) inspired in all the heavens their mandate."

(Qur'an, 41:12)

"And He (God) raised the sky and set the balance."

(Qur'an, 55:7)

In a rapidly expanding universe, where matter is uniformly distributed how do galaxies form?

Calculations by cosmologists indicate that matter in the early universe was uniformly distributed and hence gravitational contractions (contraction is opposite of expansion) in an expanding universe could not have taken place due to natural circumstances unless some special features were built into they system about one second after the big bang by intelligence.

If the big bang were a chance event what we would see would be a disorderly arrangement of matter with no galaxies and no order. An intelligent designer controlled things.

(55:33) THE CONQUEST OF SPACE

From our point of view, three verses of the Qur'an should command our full attention. One expresses, without any trace of ambiguity, what man should and will achieve in this field. In the other two, God refers for the sake of the unbelievers in Makka to the surprise they would have if they were able to raise themselves up to the Heavens; He alludes to a hypothesis, which will not be realized for the latter.

1) The first of these verses is:

"O assembly of Jinns and Men, if you can penetrate regions of the heavens and the earth, then penetrate them! You will not penetrate them save with a Power."

(Qur'an, 55:33)

The translation given here needs some explanatory comment:

a) Arabic is a language, which is able to introduce a nuance into the condition, which is explicit. There is one word to express the possibility *(ida)*, another for the achievable hypothesis *(in)* and a third for the unachievably hypothesis expressed by the word *(lau)*. The verse in question has it as an achievable hypothesis expressed by the word *(in)*. The Qur'an therefore suggests the material possibility of a concrete realization. This subtle linguistic distinction formally rules out the purely mystic interpretation that some people have (quite wrongly) put on this verse.

b) God is addressing the spirits (jinn) and human beings (ins), and not essentially allegorical figures.

c) 'To penetrate' is the translation of the verb *nafada* followed by the preposition *min*. According to Kazimirski's dictionary, the phrase means 'to pass right through and come out on the other side of a body' (e.g. an arrow that comes out on the other side). It therefore suggests a deep penetration and emergence at the other end into the regions in question.

d) The Power *(sultan)* these men will have to achieve this enterprise would seem to come from the All Mighty. There can be no doubt that this verse indicates the possibility men will one day achieve what we today call (perhaps rather improperly) 'the conquest of space'. One must note that the text of the Qur'an predicts not only penetration through the regions of the Heavens, but also the Earth, i.e. the exploration of its depths.

2) The other two verses are taken from sura 15, (verses 14 and 15). God is speaking of the unbelievers in Makka, as the context of this passage in the sura shows: 'Even if We opened unto them a gate to Heaven and they were to continue ascending therein, they would say: our sight is confused as in drunkenness. Nay, we are people bewitched."

The above expresses astonishment at a remarkable spectacle, different from anything man could imagine.

The conditional sentence is introduced here by the word *lau,* which expresses a hypothesis that could never be realized as far as it concerned the people mentioned in these verses.

When talking of the conquest of space therefore, we have two passages in the text of the Qur'an: one of them refers to what will one day become a reality thanks to the powers of intelligence and ingenuity God will give to man, and the other describes an event that the unbelievers in Makka will never witness, hence its character of a condition never to be realized. The event will however be seen by others, as intimated in the first verse quoted above. It describes the human reactions to the unexpected spectacle that travelers in space will see: their confused sight, as in drunkenness, the feeling of being bewitched... This is exactly how astronauts have experienced this remarkable adventure since the first human space flight around the world in 1961. It is known in actual fact how once one is above the Earth's atmosphere, the Heavens no longer have the azure

appearance we see from Earth, which results from phenomena of absorption of the Sun's light into the layers of the atmosphere.

The human observer in space above the Earth's atmosphere sees a black sky and the Earth seems to be surrounded by a halo of bluish color due to the same phenomena of absorption of light by the Earth's atmosphere. The Moon has no atmosphere, however, and therefore appears in its true colors against the black background of the sky. It is a completely new spectacle therefore that presents itself to men in space, and the photographs of this spectacle are well known to present-day man. Here again, it is difficult not to be impressed, when comparing the text of the Qur'an to the data of modern science, by statements that simply cannot be ascribed to the thought of a man who lived more than fourteen centuries ago.

Between the years 1905-15, and in his theory of relativity, Albert Einstein stated that the speed of light is a limiting velocity in the universe; nothing can travel faster than that. His theory also took the speed of light to be constant, unaffected by the movement of its source and independent of all observers. Quasars, which are the most distant objects in the universe travel at speeds approaching 80% of the speed of light but nothing travels faster than the speed of light

Could it be that the speed of light acts as a gate, a valve or a barrier between our universe and other universe? A different time-space universe where matter, if it can still be called so, exists and is traveling at speeds higher than that of light? We cannot cross that barrier ourselves nor can any physical matter, but there is strong indication that there is some kind of existence on the other side.

A mention should be given here to some speculation concerning some new particles called 'tachyons' which occur in some nuclear reactions. These particles are believed to travel faster than light. They can never travel at the speed of light, only faster. That also supports the idea of the speed of light being a barrier. In short 'tachyons' behave in just the opposite way from matter, but as no one has actually observed a 'tachyons', could the reason be because they exist in a different dimension of time-space?

When we examine the verses in the Qur'an that relate to this support, we find incredible information concerning not only the creation and existence of multiple universes, but also regarding the barriers lie between them. All that 1400 years ago at a time when the size of the whole universe was estimated to be not more than a few kilometers.

Multiple universes are mentioned in more than one verse in the Qur'an as in:

"Have you not seen how God has created seven skies one above the other?"

(Qur'an, 71:15)

The barriers that exist between these universes are mentioned in the following verse:

"…If you can penetrate through the zones of the skies and the earth, then penetrate, you will not do so without authority."

(Qur'an, 55:33)

The word "penetrate" implies the existence of some kind of barriers between the zones of the skies (universes).

(55:37) THE NEW REDDENING OF THE COSMOS

Universe was expanding for a long time, and it is expanding now, too. But, will it always go like this? Will it always expand? This question divided scientists into two groups since years ago. Some of them thought that the universe will always expand, some didn't. Two of them had some proves for their ideas.

But now, scientist found lots of proves about the universe's expand will stop sometime. It is the "Closed Universe Model". You can find a few scientists that think the universe is "open". But last calculations given this result: The Universe is 92% Closed! Scientists don't know when it stops expanding, but they know some important things. Like a balloon, when it stops expanding, it will become narrow. And at this point, all the regularity will go and the dark space starts to become red! Yes, in a short time, all the space will become red like a rose.

"What will you do when the Universe become red like a rose?"

(Qur'an, 55:37)

"On the day when the heaven shall be as molten copper."
(Qur'an, 70:8)

If present density of the Universe is two times greater than it's critical value, calculations show that the Universe will be two times greater than now in phase of it's greatest dimensions. Temperature of microwave background radiation will be a half of present day value i.e. 1,5 ^{0}K. After that when Cosmos starts to shrink, the temperature will start to increase. In the beginning there will be no reason for alarm, billions of years MWBR will have so low temperature.

But when the Universe shrinks for 1/100 of present state MWBR will dominate on the sky. Night sky will be bright (300 ^{0}K) as now in the middle of the day.

After 70 millions of years the Universe will become smaller ten times and our successors (if any) will see unbearable bright sky. Molecules in the planet atmosphere and stars and interstellar space will start separating in constituent parts, and atoms will break apart into free electrons and atomic nucleuses.

After the next 700,000 years temperature of the Universe will be ten millions ^{0}K and stars and planets will be molten in cosmic soap of electrons and nucleuses. In the next 22 days temperature will increase on 10 billions degrees.

Nucleuses will break apart on constituent elements, protons and neutrons.

(56:75, 76) THE POSITION OF STARS

This is the only oath in the Qur'an that Allah says for it "The Great Oath". From the coranic text is visible that people mostly are not aware of this Oath greatness. The

simple fact that it is Great Oath shows us that speciall attention should be paid to it. The Oath contains in itself something so colosal that destiny of the universe depends on it. Position of stars in the thing showing order of the universe.

"Nay, I swear by the positions of the stars,
And lo! that verily is a tremendous oath, if ye but knew."

(Qur'an, 56:75,76)

Position of an object in the universe is determined by two coordinates: right ascension and declincion. For us tipical Earth observer position shiftin of stars in continuous, stars move from the East to the West, and appear again in the East. This shift is visible during year seasons. So, vinter night sky is not the same as sommer night sky. This phenomena is effect of our planet revolution. So, depending on Earth's position in its orbit aroun Sun, Sun will ever project in new constelation.

STARS POSITION AND FLOW OF TIME

Having in mind unbeliavable distance of stars they seam non moveable to us. In reality, it is not the case. Space between them is constantly encreasing, and cosmos is encreasing. Constelation Virgo is in every second 1.200 km further from US.

POSITION OF THE SUN RELATIVE TO LOCAL STARS

First, the Sun and the other stars in its vicinity partake of the general rotation of the galaxy (the Milky Way Galaxy rotates once about every 225 million years). This corresponds to an average velocity of about 220 km/s. The space velocities that we measure for other stars then correspond to deviations from this average motion for the stars around the Sun. This happens because the Sun and the stars near it are on somewhat different orbits around the center of the galaxy, so at any one time the Sun is overtaking some stars and being passed by others.

VELOCITIES OF STARS

The small motions of individual stars on the sky (proper motions) are determined from accurate mapping of their positions at intervals of time stretching from a few years to decades. These motions across the sky combined with their motions along the line of sight (from the doppler shift of spectral lines) give their space motions. With a knowledge of their distances, astronomers can build up a 3-dimensional picture of the distribution and velocities of stars in the Galaxy. From such a picture, they have found relationships between the chemical composition of stars and their positions and velocities within the Galaxy.

(57:25) FORMATION OF IRON (heavy elements)!

"This is no less than a reminder to (all) the worlds. And you shall certainly know the truth of it (all) after a while."

(Qur'an, 38:87-88)

The Qur'an is a reminder for all of mankind until the Last Hour. It contains information that man discovers in due time. Because of this Qur'an was revealed from Allah's knowledge and every single verse in it was revealed with Allah's knowledge.

The energy of the early solar system was not sufficient to produce elemental Iron.

In calculating the energy required to form one atom of iron, it was found to be about four times as much as the energy of the entire solar system. In other words, the entire energy of the earth or the moon or the planet Mars or any other planet is not sufficient to form one new atom of iron, even the energy of the entire solar system is not sufficient for that. The scientists believe that iron is an extraterrestrial that was sent to earth and not formed therein.

We read the Qur'anic verse saying:

"And we sent down Iron, in which is Great might, as well as many benefits for mankind."

(Qur'an, 57:25)

The theories that account for the formation of the planets have changed radically. Today most astronomers believe that the Earth and the other planets originally formed out of a nebula that surrounded the Sun. This is thought to have occurred five billion years ago.

Studies of radioactive material on earth show that it could not be much older than this, for if it were, that material would have all decayed and turned into lead by now.

This theory is known as the 'Modern Nebular Hypothesis' after the modification of the old 'Nebular Hypothesis'. But since the nebula consisted primarily of hydrogen and helium, this hypothesis does not seem to offer a satisfactory explanation as to how the heavier elements have formed on earth and also on the other rocky inner planets (Mercury, Venus and Mars). Certainly the outer gaseous planets (Jupiter, Saturn, Neptune and Uranus) are very similar in composition to the sun. The major proportion of their mass, like the sun, consists of hydrogen and helium and thus their formation is in line with the 'Nebular Hypothesis'. It is the presence of the heavier elements on the rocky planets that is still not satisfactorily explained.

The Qur'an presents a truly remarkable piece of information concerning the formation of these heavier elements. This information seems to account for the puzzle that remained unsolved by the 'Nebular Hypothesis.'

In the Qur'an it is stated that iron was introduced on earth at a later stage than when the earth was initially formed.

"… And We have sent down iron, in it is great strength."

(Qur'an, 57:25)

The words "sent down" clearly indicate the prior existence of the earth. This startling information confirms the 'Nebular Hypothesis' and solves it's remaining puzzle. The remarkable fact here is that the Qur'an not only is an agreement with a modern theory, but that the modern theory itself depends on the Qur'an for it's validity!

The formation of the heavy elements poses further intriguing questions. The atoms of these elements, like other elements, are comprised of a nucleus orbited by a number of

electrons. The nucleus contains a number of protons, which are positively charged, and a number of neutrons, which are neutral. But since like charges repel each other while opposites attract, we might expect the nucleus to split apart, with every proton trying to get away from every other proton. What is it then that holds them together?

Gravity, due to the mass of the protons and neutrons, is certainly insufficient. It is believed that there is a strong binding force, a thousand times a million multiplied by itself six times, stronger than gravity. In numerical terms it is 10 followed by 39 zeros ! This binding force gets larger the heavier the element is to the extent that it is believed that the binding force inside the atoms of iron is larger than the free energy available in the solar system! Again this seems to suggest that these heavier elements could not have been formed in the solar system, and thus is in line with the information contained in the Qur'an.

The source of iron (Fe), we read in the Qur'an: "Verily , we have sent down iron in which there is great might and uses for human beings". (Q, 57 :25) When the early commefitators of the Qur'an tried to explain this verse they explained that anzalnaa (we have sent down), was not a physical sending down but meant that iron was created with the qualities of strength and might. However, it has recently been proven that all iron, not only in our planet but also in the entire solar system was obtained from outer space. This is because temperature of the sun cannot generate iron.

The sun has surface temperature of 6000 degrees Celsius and a central temperature of about 20 million degrees Celsius. There exists much hotter stars that are known as novae or super novae where temperatures can reach l00s of billions of degrees Celsius and it is in these stars that iron is formed. When the percentage of iron reaches a certain proportion of the mass of the star it explodes these exploded particles travel in space until the gravitational fields of other heavenly bodies capture them. This is how our solar system all obtained its iron and it is an established fact today that all the iron in our solar system was not generated or created within the system but has come to it from outer space.

One wonders why the Qur'an comments on matters like these, things that were not known to anyone at the time of revelation or even for centuries afterwards, unless Allah (swt) knows in His eternal knowledge that the time will come when man will then immediately realize that the Qur'an is the word of Allah and that Muhammed (s) is His last messenger.

How Supernovas Produce Heavy Elements

A team of astronomers using NASA's orbital Chandra X-ray Observatory has discovered key evidence that sheds light on how silicon, iron and other elements were produced in massive supernova explosions.

For the first time, scientists have clearly identified what was produced, and where, deep within an exploding star.

During their lives, stars are factories that take the simplest element, hydrogen, and convert it into heavier ones. After consuming all the hydrogen in its core, a star begins to collapse and its central parts form a black hole while the rest of the star is blown apart in a tremendous supernova explosion.

Supernovae are rare, occurring only once every 50 years or so in a galaxy such as our own.

In addition to understanding how iron and the other elements are produced in stars, we also want to learn how they get out of stars and into the interstellar medium. This is

why the study of supernovae and supernova remnants is so important. Once released from stars, newly created elements can then participate in the formation of new stars and planets in a great cycle that has gone on numerous times already. It is remarkable to realize that our planet Earth, and indeed even humanity itself, is part of this vast cosmic cycle.

(58:6) LIFE AFTER DEATH

According to Freud, every human action, whether big or small, good or bad, is permanently recorded in Unconscious and remains in tact whether one may remember it in life time or not. Freud knew the above facts through the experiments and he expressed great surprise that each human act virtually lives immortal in Unconscious, and the passage of time does not affect it. He was sure that further research on this aspect might reveal astonishing facts about human nature.

The discovery that each human action is recorded in his Unconscious mind which cannot be wiped out is a startling finding as it establishes that Human Self continues to live after the physical death of the body. Unfortunately, Freud did not know that this very aspect of man has already been revealed in the Holy Qur'an which lays down that every human action is persevered in Human Soul till the Day of Judgement. The revelation reads:

"On the day when Allah will raise them all together then inform them of what they did. Allah records it, while they forget it. And Allah is witness over all things."

(Qur'an, 58:6)

" And every man's augury have We fastened to his own neck, and We shall bring forth for him on the Day of Resurrection a book which he will find wide open. (And it will be said unto him): Read thy book. Thy soul sufficeth as reckoner thee this day."

(Qur'an, 17:13-14)

The verse tells three things:

That every human action clings to his neck;

That on the Day of Judgement when he will read this record he will be surprised that there is not a single action of his which has not been written in that record;

That this record remains attached with each man after his death and he will get reward or punishment according to his deeds.

Unless we accept the third factor mentioned above that this record goes with the man even after his physical death, the first two factors found by Freud carry no meaning. As a matter of fact the first two factors lead to the third factor. As we know, the laws of time and space apply in this world only and if there is any other world after death, that would be free from the barriers of time and space. In the present life, each of our conscious actions is confined within the time and barriers but according to Freud's

results if man has any Unconscious life which is free from time and space then it clearly establishes that man's present life will continue even after his physical death.

The end of man's physical life itself the result of time and space and since Unconscious (the highest form of mental life) is free from limitations of time and space, we have perforce to believe that death does not come on the Unconscious. Death comes only on the physical frame of Human being. That Unconscious keeps the records in tact shows that the Unconscious exists as a separate entity apart from the physical body. As a matter of fact the external processes of material universe laid in space-time, matter and motion have since yielded into inward mental processes of Human Self which has already a sense of immortality.

(65:36-40) RESURRECTION - DIFFICULT TASK OR NOT

"What, does humankind think that they will be left to roam at will? Was he not a drop ejaculated? Then he was a leech-like structure. And He (God) created and formed. And made of him a pair, the male and the female. What, is He (God) then not able to quicken the dead?"

(Qur'an, 65:36-40)

The above verse of the Koran questions those who reject the notion of the resurrection of the dead: What is the more difficult task: That you were created from an insignificant drop, which was so small that it couldn't be seen except through a microscope, or that one day you will be formed from your remnants?

"What, does man think that We shall not put his bones together again? Yes indeed, We are able to shape his very fingers."

(Qur'an, 75:3-4)

Scientists recently discussed reproducing an extinct species of elephant by use of a microscopic unit of long-dead gene material. No one in the scientific community said that that was unreasonable. The point is that the resurrection of the dead might be an unusual think but it certainly is not unreasonable. The use of cloning techniques throws further light on the amazing nature of the Koranic verse which compares the resurrection of the dead with human development from an insignificant zygote to the fetus.

(70:4) THE AGE OF THE UNIVERSE

Astronomers rely on red shift to calculate the speeds and distance of the furthest galaxies and quasars. These distances give us indications to the age of the universe. The

most distant quasars, which have velocities of some 240,000 km/sec (80% the speed of light), are at distances of up to 14 billion light years (a light year being the distance traveled by light in one year). When we look into depth of space, we are actually looking back far into the past. When we look at that distant quasar, we are not seeing it as it is now, but as it was 14 billion years ago.

The modern accepted figure for the age of the universe is a little bit more than 18 billion (thousand million) years.

Could it be possible that the age of the universe is also found in the Qur'an?
Well, let's take a look at two verses:

"The angels and the spirit ascend unto Him in a day, the measure of which was fifty thousand years."

(Qur'an, 70:4)

This verse refers to the ascent of angels and the spirit (meant to be Gabriel) back to heaven after settling all matters of life in the universe.

The verse clearly said a day that "was" and not a day that 'is', which clearly indicates that that day was in the past (50,000 years ago).

"…A day relative to your God is equivalent to a thousand years of your count."

(Qur'an, 22:47)

With a few simple equations:
1 day (for God) = 1000 years (for man)
1 year = 1000 x 365 (for man) = 365,000 years
50,000 years (for God) = 365,000 x 50,000 (for man) = 18.25 billion!

The 50,000 years mentioned in verse 1 are meant to be of God's years and not of man. That is because man was not mentioned at all in that verse, and more importantly because the subject of the verse (creation of the universe) is obviously a matter executed by God and not by man and, so, its description must also be as related to God and not to man.

This becomes evident when we compare this verse to other verses that clearly speak of years as related to man's count like the verse:

"…On a day, the measure of which was a thousand years of your count."

(Qur'an, 32:5)

(70:4) THE SPEED OF TIME

Einstein discovered this idea in 1921, but before this discovery by about 1330 years, God, in His Holy book (The Holy Qur'an), mentioned the idea of relativity in

clear terms. It was not understood until God revealed the same idea to one of his creatures in a mathematical form. God says in the Holy Qur'an:

"He will plan His ordinance from the heaven unto the earth, then will it go up to Him in a day the duration of which is a thousand years according as you reckon."

(Qur'an, 32:5)

Also,

"The angels and the Spirit ascend to Him in a day, the measure of which is fifty thousand years."

(Qur'an, 70:4)

Notice that the first mentioned verse offers four phrases and words that constitute the heart of the special theory of relativity, and they are: "go up," "a day," "a thousand years," and "according as you reckon." The verse indicates that God's ordinance is moving upwards, and that it's not static. Then it tells us that one day equals our understanding of 1000 years. When these orders leave earth upwards they experience one day of travel themselves, but 1000 years would have passed by us before the orders reach their destination.

That is to say, if you were traveling in a spaceship alongside these orders and looked at your watch when you reached the target you would have experienced one day of travel, but look out the spaceship's window, and you'd see generations and generations had passed on earth. If you had left your kids on earth, then you would have become a grand grand grand grand father?

The second verse shows that the angels and the spirit ascend into the heavens in a day equal to fifty thousand years. How could there be a day that is equal to 1000 years, and another that is equal to 50,000 years? Is this reasonable? Absolutely! Time is relative, and it depends on the speed of moving objects relative to each other. The faster the object the larger the time difference. Which means that the angels and the spirit are faster than the orders in their ascensions.

If we try to calculate the speed of the angels using the equation Einstein developed we would find out that we need a calculator that operates with a large number of decimal points. I have tried to calculate their speed once, but I couldn't. The computer I am currently using is not precise enough, and I couldn't get enough decimal points. The reason for this is because the speed of angels is very close to the speed of light. (You can find these equations in books of physics. They are not hard to find!)

(70:4) THE SPEED OF THE ANGELS

"The angels and the Spirit ascend to Him in a day, the measure of which is fifty thousand years."

(Qur'an, 70:4)

For all those hearing this verse the first time, the verse indicates on a foggy and unbelievable innuendo about the day, which is so long on Earth! Let’s ponder over it!

But, there is no answer. What happened with the time? Is it not only a symbolical number, which shows us how a man should ascend to The Most High? And that’s all.

But, as if all was not said! Numbers have a magical might, thay attract us stronger or weaker so with their’s authoritative, exact results, thay lead us to the goal that could be fascinating, but truthful, induring... Scientist Albert Einstein who gave theoretical base of atomic bomb, has defined a famous theory of time-space relativity.

This theory (in it’s predominant part) as truth has been proved by cyclotrons which can accelerate elementary particles almost to the speed of light. According to this theory, space, time and mass, are not constant values, thay change depending on the speed of the object that moves.

Mathematically it seams as:

$$t \quad \frac{t_0}{\sqrt{1 \quad \frac{v^2}{c^2}}}$$

Where:

t - time with some speed of moving object, particle or space ship,

t_0 - time that phases in stationary state, so called our time or ordinary time,

v - velocity of an object

c - velocity of light. C is constant and values 299792.4 kms^{-1}. Equation shows that if the speed of moving tends to the speed of light, the time in that space ship or rocket starts to extend more and more, stopping on the speed of light value.

Let’s see what happens when the speed of light has been reached *(v=c)*:

$$t \quad \frac{t_0}{\sqrt{1 \quad \frac{c^2}{c^2}}} \quad \frac{t_0}{\sqrt{1 \quad 1}} =$$

The time has become unlimited, endless. If time does not pass, i.e. if it is endless, infinite, in that case it didn’t start and there is no end. Where there is no time, no beginning, no end? Let’s stop for a moment. Where do angels and The Spirit travel, if not to infinity?

Similar equation which is related to time, is related to mass:

$$m \quad \frac{m_0}{\sqrt{1 \quad \frac{v^2}{c^2}}}$$

It means that when $v=c$ an unlimited expanding begins, i.e. increasing of mass.

Let’s get back to verse 70:4. Insert dates from this verse in the formulae denoting dilatation of time:

t_o=1 day
t=50,000x365 days
c=299792.458 *km/s* the speed of light in vacuum

$$v \quad c\sqrt{1 \quad \frac{t_0^{\,2}}{t^2}} \qquad\qquad v \quad c\sqrt{1 \quad \frac{1^2}{50.000 \quad 365^{\;\;2}}}$$

v=C x 0,999999999999998498780258960404202
v=299792,45799999954994564383561604 kms^{-1}

Conclusions:

Angels and Spirit – the phenomenas we do not see or feel are moving by the speed, which is a little bit below the speed of light. If the angels could, thay would speed up to the limit possible or allowed, otherwise thay would not travel a whole day. Equations show that angels travel toward something where time never existed, nor passes, and that's all.

For the limit case $v=c$, time never started!

If the time never started, then nothing is changing, and if didn't start it can not pass, nor finish.

Now it is our sens that rebels! Is there any way for something to be infinite? It is possible, but we can not comprehend. The same thing is with the matter. If she is not infinite than it is created, and according to the first law of thermodynamics, it can not be created from nothing, nor pass to nothing.

Means, something must be infinite, forever, endless! And must have been creation from nothing! Allah!

(70:40) THE EASTS AND WESTS

We must also mention, with a quotation of some verses from the Qur'an, the idea that there is more than one Orient and one Occident. This is of purely descriptive interest because these phenomena rely on the most commonplace observations. The idea is mentioned here with the aim of reproducing as faithfully as possible all that the Qur'an has to say on this subject.

Easts, what are two easts and two wests? What's the distance of two easts? We can ponder over these verses in time-space level, galactic level, level of planet Earth and in metaphysical sense.

Commentators of these verses are mostly bound to solar system in Sun-Earth relation. We can not escape these limitations, but it will not stop us in pondering.

Observed from the Earth there is unlimited number of easts and wests-as many as number of stars in the sky. Even more there are invisible rising and sets. Assessment says that at least of total number of Milky Way stars have planetary systems, which are cold and thus invisible.

As for the stars, expectances here are circumpolar stars that never rise nor set. An example is Ursa Maior constellation stars. On the other side we will never see anticircumpolar stars of Southern Hemisphere.

The possible explanation of two easts and wests could be that Sun only two times in a year rises exactly in the easts and sets exactly in the west. It is vernal equinox and autumn equinox when Sun's declination falls to zero point.

The following are examples:

'Lord of Orients and Occidents'. **(Qur'an, 70:40)**
'Lord of the two Orients and the two Occidents'. **(Qur'an, 55:17)**
'Distance between the two Orients', **(Qur'an, 43:38)**

Anyone who carefully watches the sunrise and sunset knows that the Sun rises at different point of the Orient and sets at different points of the Occident, according to season. Bearings taken on each of the horizons define the extreme limits that mark the two Orients and Occidents, and between these there are points marked off throughout the year.

The phenomenon described here is rather commonplace, but what mainly deserves attention in this chapter are the other topics dealt with, where the description of astronomical phenomena referred to in the Qur'an is in keeping with modern data.

(71:14) CREATION IN STAGES

Evolutionists say that the purpose of evolution is to attain survival adaptation. Adaptation, without any intelligence involved, based on random chance doesn't make any sense at all. The concept of what is "functional" has to be defined [using intelligence] and then strides towards reaching that goal made. Without putting God in the picture, this journey to perfection makes no sense at all and is outright foolishness.

"What's wrong with you that you hope not towards God [Allah in Semitic languages including Hebrew, Elah or Alah] for dignity. WHEN IT IS HE WHO CREATED YOU BY STAGES [OR PHASES- ATWAAR IN ARABIC]."

(Qur'an, 71:14)

"And Allah created you from dust, then from a drop."

(Qur'an, 35:11)

The first verse is a very general, yet accurate description of our creation as coming in stages. The second verse puts some perspective on the whole affair: how man originally came from dust (Adam), and then from a drop.

There are at least four specific details regarding human development in the Qur'an which modern science has revealed only within the last few centuries, and in some cases only in this present century.

(75:4) FINGERPRINTS

Fingerprints are infallible means of identification. In addition to their value in the apprehension of criminals, fingerprints can ensure personal identification of humanitarian reasons, such as in cases of amnesia, missing persons, or unknown deceased. Fingerprints are invaluable in effecting identifications in tragedies such has fire, flood, and vehicle crashes. In criminal matters, besides establishing the identity of the arrested person, fingerprint records provide a history of known offenders, or indicate when a person is an offender.

Fingerprints, the characteristic elevated ridge patterns on the fingertips of humans, are unique to each individual. The fingers and toes, the palms of the hands and soles of the feet, are covered with a system of ridges, which form certain patterns. The term dermatoglyphics is applied to both the configurations of the ridges, and also to the study of fingerprints. Beside the medicolegal importance of the ridge patterns of fingerprints, characteristic dermatoglyphics abnormalities frequently accompany many chromosomal aberrations.

Comments:

1. Since the chromosomal abnormalities are the genetic indicator in the formation of aberrant ridges, one can say that the pattern of ridges of the skin of the finger tips are not a kind of haphazard formations but a pre coded arrangement built within the genetic codes of human beings.

2. Of all the body parts, the next to impossible component to replace would be the "fingertips" of a man. The author of the Holy Qur'an, the Supreme Creator, warns us not to under estimate His capacity for its recreation.

3. If the original formation of these ridges were pre coded, its recreation from a known code would be a scientifically comprehensible possibility.

"Does man think that We cannot assemble his bones? Yes, We are able to put together in perfect order the very tips of his fingers."

(Qur'an, 75:4)

Comments: In the era when the above verse was revealed, the marvel of replacing the fingertips could have sounded like a mere term of expression. Today, we know what it really means. Who else could have spoken with such confidence, His Supernatural ability of: "putting together in perfect order, the tips of our fingers", in the sixth century, than the One who had created the genetic code that formed these ridges?

How did Mohammad (pbuh) know about the 20th century scientific fact known as " the Finger print"? The fingerprint is the only solid ID for humans, and yet Mohammad (pbuh) mentions that 14 centuries a go!

(76:1) THE AGE OF MANKIND

A verse which makes a small note regarding the age of mankind with respect to the universe:

"Has there not been over Man a long period of Time when he was not yet a thing thought of?"

(Qur'an, 76:1)

The Arabic word for "Time" in this verse is "Dahr" and it can mean either all of eternity or simply a tremendously long time. Modern science can help us understand this verse better.

The first appearance of humans on this earth is estimated to have occurred on the order of one million years ago. The age of the universe, on the other hand, is estimated at roughly fifteen billion years. If we normalize the age of the universe to one day, then man would be less than six seconds old.

(76:2) FERTILIZATION LIQUID

"WE have created man from a mingled sperm-drop that WE might try him; so WE made him hearing, seeing. "

(Qur'an, 76:2)

Important detail in the Qur'an on human development is the description of the fertilizing liquid (i.e. semen):

[Qur'an, 86:6] ***"He (man) is created from a gushing liquid."***
[Qur'an, 76:2] ***"We created the human from a drop which is a mixture..."***
[Qur'an, 32:8] ***"Then He (Allah) made his (Adam's) progeny from a quintessence of a despised liquid."***

The second and third verses relate to the contents of semen. Modern science has established that semen is in fact a composition of different secretions, which come from four different glands during ejaculation: the testicles, the seminal vesicles, the prostate gland, and the urinary tract glands. The actual sperm cells come from the testicles; the other three glands produce no fertilizing agents.

The Qur'an goes farther than just informing us that semen is a mixture of liquids. It tells us in [32:8] that only the "quintessence" of the liquid is used (the "despised" comes from the fact that semen is emitted from the same place as urine, and thus may be despicable in some people's sight). The Arabic word for "quintessence" in this verse signifies extracting the absolute best out of something.

The numbers tell the story: a normal ejaculation involves about 3 ml of fluid containing between 120,000,000 and 150,000,000 sperm cells. Of these cells, only one fertilizes the egg in the female, and this is the point which [32:8] alludes to.

A third detail of human development mentioned in the Qur'an concerns the newly fertilized egg:

"Was he (man) not a drop of semen emitted? Then he did become something leech-like which clings..."

(Qur'an, 75:37-38)

Recent observations of the fertilized egg in the womb have revealed that the egg literally implants itself into the uterine wall. It "clings" in the strongest sense, and it remains like so in the early stage of development. On top of that, the developing organism acts as a leech on the female host in the sense that it draws its sustenance directly from its mother's body.

Finally, the Qur'an gives a fascinating account of embryological development (the first three months) in the following verses (certain words have been transliterated directly from the Arabic):

" ...We made the drop into an ALAQAH (leech-like structure), and then We changed the ALAQAH into a MUDGHAH (chewed-like substance), then We changed the MUDGHAH into IDHAAM (bones, skeleton), then We clothed the IDHAAM with LAHM (flesh, muscles), then We caused him to grow and come into being as another creation."

(Qur'an, 23:14)

"...We created you out of dust, then out of a drop, then out of a MUDGHAH, partly formed and partly unformed..."

(Qur'an, 22:5)

Verse [23:14] divides embryological development into four stages. The first stage picks up right after fertilization ("drop"), and is characterized by an ALAQAH or "leech-like structure" which describes how the egg implants itself into the uterus (see above). The second stage describes the embryo as evolving into a MUDGHAH which means something which has been chewed (especially a piece of meat), or which has the appearance of having been chewed.

This seemingly crude description is in fact quite accurate: after the fertilized egg lodges itself in the uterus, it begins to receive its first nutrients and energy from its mother. Consequently, it begins to grow especially rapidly, and after a week or two it looks like a ragged piece of meat to the naked eye. This effect is enhanced by the development of small buds and protrusions, which will eventually grow into complete organs and limbs.

The next two stages described in verse [23:14] tell of bones being made from the MUDGHAH, followed by the "clothing" of the bones with flesh or muscles. If we follow the progress of the embryo with our own eyes, we find that after approximately four weeks, a process called 'differentiation' begins, where groups of cells within the embryo transform themselves to form certain large organs.

One of the earliest structures to develop in this stage is the cartilaginous basis of the human skeleton (in subsequent months, the cartilage hardens or ossifies). It is followed soon after by the appearance of a host of other organs including muscles, ears, eyes, kidneys, heart, and more. This maintains the order described in the Qur'an. Verse [23:14] concludes with the growth of the organism in the womb (and simple growth is the primary characteristic of the fetal stage) followed by its birth.

Verse [22:5] adds one more interesting note on the embryo. In this verse, the MUDGHAH is qualified with the phrase

"Partly formed and partly unformed."

As alluded to above, our modern observations of embryological development have revealed how different structures and organs develop one after another through differentiation. This gives rise to unusual situations where the embryo is unevenly formed (i.e. lungs but no ears for example).

(77:7,8) THE DEATH OF STARS

"When stars lose their lustre." **(Qur'an, 77:8)**

"When the sun is rounded (swelling like a ball)"
"When the stars have collapsed"
"When the oceans boil over in a swell"
(Qur'an, 81:6)

The Koran mentions the 'death of stars' (Koran 77:7-8).

Astronomers including Dr. Patterson of Southwest Missouri State are surprised at finding this information in the Koran. They know that at the time of Muhammad, people believed that once a thing is formed, it is permanent. The Koran is very accurate; our own sun is a dying star.

<u>The Death of a Giant Star:</u>

A core temperature in a giant star at the end of its life averages over 3 billion K! This temperature is reached when Iron is being formed in the core. The Iron formed is unable to undergo any more nuclear change, because its nuclear construction will not allow it. The Iron instead continues to compress into a very compact core. This compression raise the core's temperature to over 100 billion K. The mass of the Iron core now determines its fate. If the core is around 1.5 solar masses (approx. 2.8 x 1030 kg or 2.7 x 1027 tons) it will compress from a ball the same diameter as the Earth to a ball only *16 km / 10 miles* in diameter!

This compression causes the nuclei of Iron to fuse together into one large ball of neutrons and neutrinos. The core recoils from the repulsion of neutrons, releasing the neutrinos. This sudden recoil sends a shockwave through the outer layers of the star. This shockwave is enough to perform fusion past Iron. All of the elements in the universe heavier than Iron are created in this manner. After this shockwave rips through the shells surrounding the core, sending them off into space in a **Supernova**.

All that is left is a ball of neutrons surrounded by a lattice of Iron atoms, called a **Neutron Star**. If the mass of the core is around 3 solar masses, the same events happen including the supernova and the formation of the neutron star, but instead of the neutron star happily “floating” around, it is too massive to remain stable. Gravity takes over again, causing the eventual collapse of the neutron star to a single point, theoretically forming a **Black Hole** or **Singularity**. Theoretically, black holes are two-dimensional points of gravity so strong that nothing in the universe can escape them, including light.

Death of an “Ordinary” Star

After a Low Mass star like the Sun exhausts the supply of hydrogen in its core, there is no longer any source of heat to support the core against gravity. The core of the star collapse under gravity’s pull until it reaches a high enough density to start burning helium to carbon. Meanwhile, the stars’ outer envelope expands and the star evolves into a red giant. When the Sun becomes a red giant, its atmosphere will envelop the Earth and our planet will be consumed in a fiery death.

The Sun will eventually evolve into a red supergiant as it exhausts the helium in its core. At this stage, it will have an outer envelope extending out towards Jupiter. During this brief phase of its existence, which last only a few tens of thousands of years, the Sun will lose mass in a powerful wind. Eventually, the Sun will lose all of the mass in its envelope and leave behind a hot core of carbon imbedded in a nebula of expelled gas. Radiation from this hot core will ionize the nebula produces a striking “planetary nebula”, much like the nebulas seen around the remnants of other stars. The carbon core will eventually cool and become a white dwarf, the dense dim remnant of a once bright star.

The red giant expels its outer layers into space in several episodes. Some of the episodes are gentle, some violent. The result is a temporary, expanding envelope of glowing gases surrounding the star, becoming thinner and sparser until lost to view after 50,000 years. This is the planetary nebula. The glaring, fiery core of the star is revealed as the gases spread outward. Here, at the nebula’s center, is a “white dwarf’’ star.

(77:8) RED GIANT AND WHITE DWARF

At the time of the Qur’an (7th century), it was still believed that all the stars in the sky including our sun were eternal and are made of a material that never fades or decays. No one was really aware of the nature of the reactions that took place inside stars for that was to be 20th century atomic theory and as was mentioned before, was mentioned in the Qur’an. These atomic reactions would take place inside a star for a finite time and then the star would eventually run out of energy when it has used up all its resources. When that stage is reached, a star like our sun will undergo a series of drastic changes. First, it will expand to become a red giant. The nearest planet, Mercury, would be swallowed up and the intense heat given off by the sun in this red giant stage would cause all the seas and oceans on earth to boil over and evaporate, signaling the end of life

on earth. Eventually, the star would start to collapse and lose its lustre and end up as a white dwarf. Here, the Qur'an uses the very accurate scientific words:

"When stars lose their lustre."

(Qur'an, 77:8)

The finite life of stars is also referred to:

"He has ordained the sun and the moon, each one runs (it's course) for an appointed time."

(Qur'an, 13:2)

Surah, 81 in its opening verse, describes the end of time as follows:

"When the sun is rounded (swelling like a ball)"
"When the stars have collapsed"
"When the oceans boil over in a swell"

(Qur'an, 81:6)

It is very significant how the verse said "when the stars have collapsed" and not 'when the sun has collapsed', because the boiling of the oceans will be a result of the expansion of the sun (red giant stage) and not it's collapse, that is, the ocean will boil over long before the sun starts to collapse. Also, the term "collapse", as used in the Qur'an, is the precise term used by today's astronomers to describe that stage of a star's life.

(78:6,7) STABILIZING MOUNTAINS

Another striking example in the Qur'an is that relating to mountains. The Qur'an speaks about mountains in 49 different verses. In one of these verses the Qur'an describes mountains as pegs or pickets. "And the mountains as pegs (awtaadaa)" (Q 78:7).

The mountains that were formed, as the earth's crust cooled, play a major role (as modern geological theories indicate). They contribute to affixing the continents in place. These continents are virtually floating on melted layers that lie beneath. In general, the thickness of the earth's crust is about five kilometers. However, the thickness directly beneath mountains extends up to thirty-five kilometers. That is because beneath every mountain lies a reversed shaped mountain root below the surface. These reversed mountains do the job of pegs in affixing the land. This is very accurately stated in the Qur'an:

"Have We not made the earth as a wide expanse, and the mountains as pegs?"

(Qur'an, 78:6-7)

Modern geological theory also states that the area of dry land is not stable. That is due to two factors:

1- The shifting of the tops of landscape due to running water, winds or ice. Running rivers, for example, shift millions of tons of earth to the seas. Strong winds erode the mountaintops while the thawing of ice shifts enormous material in its path.

2- The area of land also diminishes due to regression, that is, the submerging of coastal land under sea level.

If we take any scientific or linguistic dictionary of today and look for the meaning of mountain we will find that scientists define mountains as high elevations on the surface of our planet. Elevations that exceed 610 m in height are called mountains and anything below this is regarded as a hill. However, in many of the American references, elevations above 300 meters are considered mountains. The Qur’an that was revealed more than 14 centuries ago describes mountains as pegs or pickets. If we look at a tent’s peg we find that most of its length, is buried in the ground, its smallest part crops out on the surface of the ground and its function is fixation.

Scientists have now come to realize that mountains are not just surface elevations or protrusions, but that they extend lo-15 times their surface elevation into the ground, and these are called mountain roots. Scientists never knew mountain roots before the turn of this century and they were highly debated until recently. A peak like mount Everest, which is almost 9 km above the ground’s surface, has a root that develops for more than 125 km inside the Earth’s outer rocky layer.

Just as the peg or picket’s function is mainly to hold the tent solidly to the ground, so too is the exact same role of mountains. We have come to know that the outer rocky layer of the Earth is fractured by faults into plates that float on molten magma. With the earth’s rotation around its own axis, these floating plates would have been rapidly moving had it not been for the stabilizing influence of mountains.

No soil could have accumulated, no water could have been stored in the soil, no plant could have germinated, no any road constructed, no house could have been built, and life would - have been impossible on our planet. For this reason Allah showered his bounties on man by fixing the earth with mountains. Mountains act like pegs or pickets that hold the continental masses down and stop them moving. Muhammad (s) is quoted to have said in an authentic hadith that when Allah created the earth it staffed to shake and jerk, then Allah stabilized it with mountains.

(78:19) THE HIGHER DIMENSIONS

Mathematically there is infinite number of dimensions. However we live in only a three dimensional space. Every object in our daily lives has a length, width, and height. The concept of dimensions more than our three is impossible to imagine. Near the sun the gravity is more intense and an extra curvature in the space in a higher dimension is present. This was first taken into account by Einstein to accurately calculate the orbit of the inner planet, Mercury.

There was a time when people believed that the earth is flat. They were afraid of the possibility of falling off the earth if they traveled too far. This cannot happen because the surface of the earth is curved and continuous like that of a ball. To get off the earth we just need to move in a dimension (direction) that is perpendicular to the surface. That is straight up, from any where we are.

We face a similar conceptual problem in understanding the higher dimensions. We may imagine that we can leave the universe only by traveling very far, and that is not true. Even if we travel billions of miles, we will still remain within the confines of our three dimensional space.

"And we know that we cannot escape from Allah in the earth, nor can we escape by flight."

(Qur'an, 72:12)

The only way to go beyond the universe is by moving into a higher dimension in a direction that is perpendicular to our three dimensional space, from right where we are. However that is also not possible as our space is not continuous with the higher dimensions. For that to occur, our space will have to be literally torn apart first and then get connected to the higher dimensions. This may happen only in the center of the black holes.

"And heaven is opened and becomes as gates."

(Qur'an, 78:19)

(79:31) WATER TRAPPED

If we trace the early stages of the development of the earth we find that the contracting nebula caused the earth to be very hot in the initial stages. As it slowly began to cool the heavier elements like iron fell to the center whilst the lighter compounds like granite and oxides surfaced at the top.

The cooling continued and a thin crust formed. The layer immediately beneath the crust eventually started to solidify giving rises and depressions above it leading to the formation of mountains and valleys. When the surface cooled further, to below 100 degrees centigrade, liquid water (which before then was still trapped inside the earth) began to form and fill the depressions that are now the oceans and seas.

The knowledge that all the water was once trapped inside the earth and then was drawn out is mentioned in the Qur'an:

"He drew from within it (the earth) it's water and pasture."

(Qur'an, 79:31)

(81:1) THE COLLAPSE OF SUN

"When the sun (with its spacious light) is folded up."

(Qur'an, 81:1)

The Coiling of Sun (meaning of Arabic word *"kuwwire"*) comprehends its growing in volume as when coiling the ball of yarn. Sun will too loose its lustre.

In a distant future the Sun will got fat transformed into red giant and will destroy all men maid on Earth. That fact is well known to scientists for tens of years. But, details of that late evolution are worked out in sooner times. According the results the Earth will survive that event, but on the edge of survival.

Scientists I.J. Sackman and K.E. Kraemer and A.I. Boothroyd evaluated new model of Sun's evolution consisting of two important parameters, brightness and diameter. Sun has begun its life in Main Sequence Star of H-R diagram 4.5 billions of years ago with only 70% of present brightness. In the next 1.1 billions of years brightness of Sun will increase 10% of present brightness. Increase of brightness and emitted energy will be enough to produce catastrophic changes on Earth. Even earlier the life on Earth will be impossible. In the next 6.5 billions of years Sun will shine 2.2 times stronger than now, and will start leaving of Main Sequence Star towards red giants.

In the next 1.3 billions of years the diameter of Sun will increase 170 times of present diameter so the orbit of Mercury will be engulfed by Sun. Of course Mercury will not exist any more. In that time Sun will get smaller and stay stable around 120 millions of years. After that the last spectacular event begins. Diameter of Sun will increase again so that its outer limit will reach 150 millions of kilometers. Game result of two forces: gravitation and radiation pressure, is the loss of star mass.

Thus the force of Sun is decreasing in affecting planets. In the end of evolutionary process of Sun, the Earth will be 1.7 A.J. from its center. In the moment when brightness of Sun is maximal (5.200 times bigger than now), surface temperature of Earth will be 1300 ^{0}C. It is enough to destroy everything man maid on Earth, because all will be in red-hot phase.

In the next few millions of years Sun will cast off its outer layer and begin quick crunch toward white dwarf with 55% of present mass. So being Sun can stay in that state tens billions of years. In the meantime lifeless planets will orbit Sun in new orbits and temperatures bellow absolute zero. Described destiny of Sun is not so dark if viewed from time scale.

The first catastrophic event will be in 1.1 billions of years, and it is 10.000 times longer than humankind existence and two times longer than existence of multicell life on Earth.

(81:15,16) RETROGRADE MOTION AND OCCULTATIONS

"But nay! I swear by those that recede,
Go straight, hide."

(Qur'an, 81:15,16)

Verse 81:15 talks about objects that are receding and leaving in their path on the sky.

Verse 81:16 suggests similar meaning and is related to the objects that are moving and during that sometimes hide and disappear. If we suppose that both verses speak about same thing, than our thinking can range from stars leaving, planets occulting stars and planets moving retrograde. When talking about planets it should be noted that that look like stars for an Earth spectator, even being cold celestial bodies.

Runaway Stars. Runaway Star are massive stars traveling rapidly through interstellar space. Like a ship plowing through the interstellar medium, runaway star HD 77581 has produced graceful arcing bow wave or "bow shock" - compressing the gaseous material in its path. This star is over 6,000 light-years away in the constellation Vela, and appears to move at over 50 miles per second. What force could set this star in motion? A clue to the answer may lie in its optically invisible companion star, an X-ray bright pulsar known as Vela X-1. This pulsar is clearly the remnant of a supernova explosion... which seems to have given this massive star and its companion a mighty kick!

Occultation. The night sky contains many wonders, but most of them are static displays. In contrast, occultations are dynamic phenomena that provide a startling demonstration of orbital motion.

"To occult" means literally "to hide." A *lunar occultation* takes place when the Moon's edge creeps up to a star and suddenly snuffs it out. The star reappears just as suddenly on the Moon's opposite side up to an hour or more lately. When the Moon is in its waxing phases, the disappearance usually happens on the Moon's dark edge, where it's easy to watch; reappearances are on the bright side, where the star is harder to see. When the Moon is waning, the situation is opposite: stars vanish on the bright limb and reappear from behind the dark edge. In either case reappearances take more planning to watch, because you need to be looking at the correct place on the Moon's limb at the moment the star pops back into view.

A *grazing occultation* happens when the Moon skims just past a star. Within a mile or two of the edge of an occultation's predicted path, termed its northern or southern limit, you might see the star wink off and on several times as it passes behind hills and valleys near the Moon's poles. Grazes are the most dynamic and interesting lunar occultations.

Planets, asteroids, and comets can also cover stars. These *planetary occultations* are much rarer than lunar ones due to the tiny apparent sizes and slow motions of the occulting objects. But there are scores of large asteroids, and because they are relatively dim, even faint stars can be seen right next to them. In fact the asteroid itself might not be visible at all in a small telescope; its presence is revealed only when the target star disappears.

Retrograde Motion. A retrograde planet is one that appears to be moving backward in the heavens from the viewpoint of earth, but this is apparent motion only and not actual.

Since the Earth travels faster in its orbit that do the superior planets, it overtakes and passes them at times during their mutual orbits around the Sun. As the Earth begins to overtake Mars, for example, Mars will appear to slow its eastward motion among the stars. Then just as the Earth overtakes it, Mars will appear to loop slightly westward for a short time. Once the Earth is well past Mars, that planet will resume its eastward motion among the stars.

(82:19) NO FREE WILL IN THE CONTRACTING UNIVERSE

Man is given free will to choose between right and wrong in the expanding universe. That is when all his deeds are recorded in time. In the contracting universe there will be no free will, and no one will have power to harm or do good to others.

"A day when no soul has power at all over any other soul. The absolute command on that day is Allah 's."

(Qur'an, 82:19)

(84:16) THE AFTERGLOW OF SUNSET

"But nay! I swear by the afterglow of sunset."

(Qur'an, 84:16)

What causes the most colorful sunsets?

During the middle of the day, air molecules scatter blue light more than the other colors, so the sky looks blue. But when the Sun is low in the sky, most of the blue light is scattered out of our line of sight because the Sun's rays must now traverse a thicker atmosphere (more molecules), thus the blue is gone and the reds, oranges, and yellows remain.

You might think that if some air molecules or aerosols scatter blue light, that more molecules would make the sky look even bluer. However, it doesn't work that way. Each of the air molecules removes a little of the blue light by re-directing it in lots of different directions. As the incoming sunlight encounters more and more of the molecules, more and more of the blue light is scattered, so there isn't enough left to paint the sky that familiar azure color.

So it makes sense that on a really clear, dry evening, when there are few water vapor molecules present, the sunsets may not be so colorful.

The presence of clouds usually makes sunsets more noticeable. Mid to high cloud decks produce the most vivid hues. Altocumulus and altostratus as well as cirrostratus and cirrocumulus clouds are high enough to catch the fleeting light as the sunsets. So even though the Sun is gone, these clouds are still aglow in scarlet and orange.

Actually, clouds of volcanic dust and ash produce the most stunning sunsets.

Sometimes for over a year after a volcanic eruption, such as Mt. Pinatubo in 1991, the sunsets and twilights are truly spectacular. Powerful eruptions can kick dust well into the stratosphere where it is illuminated by sunlight well after the Sun has set at the surface. These volcanic veils display their varying shades above the twilight arch (that band or arch of yellowish light that's visible on the western horizon at sunset).

Quite often this veil imparts a purple or lilac color to the western sky. The purplish light is a mixture of light scattered by the sunlit dust in the stratosphere and of light lower in the troposphere that is passing through the Earth's darkened shadow. Because the thickness of the volcanic dust cloud can change from day to day as upper atmospheric winds usher it around the globe, the color and appearance of the sky at sunset may be very different from one evening to another.

Whereas dust in the upper reaches of the atmosphere is beneficial to sunset coloration, pollution and haze subdue the colors. This is because the pollutant particles or particulates are much larger than the air molecules, and so are not as effective in scattering light. As a result, more light is absorbed and thus, the colors aren't as intense. On those hazy, lazy days of summer, often the Sun seems to disappear into the haze well before it approaches the horizon. When air masses are less active and the air is more stagnant, it's easier for pollutants to accumulate, robbing us of those striking sunrises and sunsets.

(85:13) THE CREATION

"See they not how Allah originates creation, then repeats it: truly that is easy for Allah."

(Qur'an, 29:19)

"Verily, He it is Who begins and repeats."

(Qur'an, 85:13)

The discovery of an expanding Universe implies the obvious, that the Universe must have an initial starting point, a Creation.

A point in the past when the radius of the Universe was zero. Since all the matter in the Universe must have been condensed in a small region, along with all its energy, this moment of Creation is referred to as the.

(86:1,2,3) KNOCKING STARS - PULSARS

(Qur'an, 86:1) ***By the heaven, and At-Tariq,***
(Qur'an, 86:2) ***And what will make you to know what At-Tariq is?***
(Qur'an, 86:3) ***The piercing star!***

Qur'anic chapter 86 begins with an unusual oath, verse 86:2 puts a question related to verse 86:1, and answer is given in the third verse. In the Arabic dictionaries we'll find that word TARIK ***(tāriq)*** denotes someone that knocks, someone banging, striking, beating, etc. Najm means the star. Takib denotes someone penetrating, piercing. Almighty God swears here by the star ***(najm)*** which produces pulses resembling knocking or beating, emitting at the same time gigantic flashes of light, radio waves, or X-rays **(*tākib*)**. We know how penetrable gamma rays are, X-rays, radio waves or light as well. What kind of star behaves like that?

Astronomers ascribe such characteristics only to neutron stars. High density and rapid rotation characterize neutron stars with great precision at periods of between a few milliseconds and several seconds.

Those are PULSAR stars! Pulsars can exhibit strong magnetic fields that are a powerful source of radio waves. These waves are emitted in a fashion similar to lighthouse beacon. Magnetic and rotational axes of a pulsar are misaligned. Therefore, the beam of light from the jet sweeps around as pulsar rotates just as spotlight in a lighthouse does. Pulsar radio emission is very distinctive, a uniform series of pulses, spaced with great precision. Every time when a radio wave sweeps over the Earth, precise pulse of radio noise can be heard, resembling knocking or beating of mighty celestial clock!

Hearing these knocks by my own ears I was amazed and almost convinced that first three verses of Qur'anic 86 chapters are related to pulsars! If you connect by Internet to some of radio observatories having recorded these radio-pulses, you will be yourself surprised by concordance of cited verses with pulsars' behavior. The most energetic pulsar known is discovered in the Crab Nebula. It rotates 30 times per second and is very strongly magnetized. Therefore, it acts as a celestial power station supplying enough energy to keep all the Nebula radiating over, practically, the whole of the electromagnetic spectrum.

FORMER INTERPRETATIONS

Abdullah Jusuf Ali explains these three ajats in his commentary in this way: *"The star of piercing brightness is understood by some to be Morning Star, by others to be the planet Saturn, by others again to be Sirius, or the Pleiads or shooting stars. I think it is best to take the "star" in the collective or generic sense, for stars shine on every night in the year, and their piercing brightness is most noticeable on the darkest night."*

Opinion of Jusuf Ali is quite unacceptable. It can not be Morning star, neither planet Saturn, nor Sirius nor Pleiads or shooting stars, because neither of these is knocking, beating. Morning star is not really star; it's the planet Venus. Saturn is not a star too; it is cold celestial body. Sirius is a star, but not knocking, beating. Shooting stars are not stars; they are rather a small particle of material not bigger than a pebble stone.

Let us mention that straying is present in commentaries of other commentators.

BASIC CLAIMS

Characteristic of celestial object mentioned in verses 86:1-3 are that it is:

1. Knocking (beating, striking),
2. A star,
3. Penetrating, piercing, drilling.

None of Solar system planets meets all those criterions because:

- None of the planets is producing pulsations resembling knocking, beating,
- Because none of them is stars, but cold celestial bodies,
- Because none of them produces so intensive radiation (in light spectrum, radio waves, X or gamma rays).

(86:5-9) GONAD FORMATION

"Let Humankind observe from what they are created. They are created from gushing fluid, the origin of which is between the vertebral column and the ribs. Indeed, Allah is able to return them..."

(Qur'an, 86:5-9)

The above Koranic verse states explicitly that the origin of human gonads is from "between the vertebral column and the ribs. It is well known today to embryologists that gonads first appear in the region of the future loins. The genital ridges make their first appearance in a four week embryo on each side of the mid line between the mesonphros and the dorsal mesentery. The gonads once formed differentiate into the male and female gonads by the seventh and eighth weeks. After that they start a process of descent. The female gonads (Ovaries) stop at the true pelvis whereas the male gonads continue their descent before birth to reach the scrotum outside the body.

Not only is the origin of the gonads in the place the Koran describes, but even in adulthood, the nerve supply, the blood supply and the lymph drainage remain connected to the area cited in the Koran as being "between the vertebral column and the ribs," and being the origin of the gushing fluid.

Those who insist that Muhammed wrote the Koran are attributing more knowledge to him than any man could have possibly possessed at the time of the Koranic revelation.

(86:11) HEAVEN'S RETURNING CAPACITY

The Earth's atmosphere acts as a high altitude mirror that returns what is useful back to the surface of the earth like:

a) The infrared radiation is reflected back which provides global warmth.
b) Water vapor, which rises and forms clouds, is returned as useful rain.
c) Tele-communication waves (Radio, TV …etc) are reflected back making it possible

for someone, say in London, to receive signals transmitted in Tokyo. The Qur'an asserts this function of the atmosphere:

"... And the sky that returns."

(Qur'an, 86:11)

The atmosphere contains the Ozone layer, which is so vital to our existence. We read in surat At-Tariq two verses that are most striking from a geological point of view. "By the Heavens that has the capacity to return; and By the Earth that has its own fractures (or its own faults)." (Q 86:11-12)

When the early commentators of the Qur'an tried to explain these two verses. "By the Heaven that has the capacity to return", they said heavens can return rain.

Raj'us-sama' is the rain. The thing that returns from heaven is rain and this is absolutely correct. One of the most important phenomena of our existence is what we call the water cycle or the hydrogeological cycle. We know that under the influence of the sun, water is evaporated from open massed like seas and oceans, and rises up in the form of water vapor to the lower level of the atmosphere, which is known as the troposphere. This troposphere layer is a distance of 13-15 km. away from the surface of the sea, but this distance varies from one climatic zone to another. Allah has given this zone the characteristic of cooling gradually as we rise up into it.

It becomes cooler and cooler, until it reaches minus 80 degrees Celsius and this is the only means by which the water vapor that is evaporated from the surfaces of oceans and seas is condensed and comes back to Earth. Unless this zone of the atmosphere has this cooling characteristic, the water, which is evaporated could be lost from the very first moment of its evaporation. Therefore, one of the miraculous aspects of our planet is this water cycle. This is one of the most striking features of what the sky can return to the earth.

The water cycle is so precise that it is well balanced between land and sea. The rate of evaporation from seas and oceans is much greater than the rate of rainfall, but on land the reverse is true-the rate of evaporation from continental masses is much less than the rainfall it receives. In this way the loss and gain of water is balanced. This water cycle is one of the most important features of our planet which is also known as the blue planet because it is the only known planet in our solar system that is enriched and endowed with this great mass of water. Yet one would be surprised it the explanation is that the meaning of 'raj' or echo or returning capacity is just water, rain, Why didn't Allah instead say: "was samaa-i-thaatil matar", "By the heavens or by the sky that returns rain?" Now we understand why, because we have come to realize that in the sky there are successive layers of protection for the earth.

These layers return to the earth all useful forms of matter and energy and return to the outer space all harmful forms. Thus, the sky does not only return rain but it returns both inwardly outwardly. Above the atmosphere is the ozonosphere, the ozone layer. This is a layer in which oxygen is further oxidized (03) and this layer is about 25 km from the surface of the sea. Allah (swt) has radiation that comes to us from the sun and from outer space. Without the absorption of these ultraviolet rays, life on earth would have been impossible. This is a form of "raja" a form of "capacity to return" but returning harmful things to the outer space. We also know that these two layers, the troposphere and ozonosphere reflect to the earth not only rain, but also forms of energy

forms of solid particles that are absolutely useful and important for the inhabitation of the earth.

The return to us heat waves that are transmitted from the earth. They return to us solid particles that are responsible for the beautiful daylight we enjoy, by multiple reflections of the sunlight on their outer surfaces. Without these, life would have been impossible on our planet.

Above the ozonosphere we find the ionosphere, an ionized layer that returns to us transmitted radio, television and telecommunication waves which are reflected back to earth.

Without this ionosphere, radio, television and telecommunication would have been virtually impossible. This capacity of the sky to return was never known before the discovery of radio waves.

Above the ionosphere we have what is called the Van Allen Belts, two concentric belts that thin enormously at the two poles and thicken enormously at the equator. These belts expel cosmic particles that travel at fantastic weeds toward the earth and would have been absolutely lethal to life on it. Above the Van Allen Belts is the magnetosphere, a sphere that also acts as a protective barrier to life on earth, expelling the greatest proportion of cosmic panicles traveling towards it.

The word “raj” in this verse is therefore truly miraculous since with one word the Qur’an describes the capacity of the sky to return either to our planet useful forms of matter and energy or return to outer space harmful forms, thereby protecting life on earth. That is why Allah (swt) in his eternal knowledge and wisdom used the word “raj” and not the word rain. “Was-safiiaa-i-thatir -raj”, “By the heavens that have the capacity to return."

(86:12) THE FRACTURED EARTH

“Wal-ardi thatis-sadi.”

(Qur’an, 86:2)

In the second verse: “Wal-ardi thatis-sadi”, Allah (swt) is giving an oath ‘by the fractured earth". The early commentators on the Qur’an could not see this, except in the form of fracturing the soil as the plant germinates. Once you place a seed into the soil and water it, a gentle shoot will penetrate the soil growing into a wonderful tree or a beautiful flower or a useful plant. The capacity therefore for the gentle shoot to penetrate the soil is miraculous by itself. However, fracturing the soil by germinating seeds is only one of the numerous aspects of the “fractured earth”.

After the Second World War, scientists went to the bottom of seas and oceans searching for mineral wealth. To their surprise they found that the deepest pans of oceans were not in the center as was previously believed, but at its peripheries, and that the shallowest pans of oceans and seas are in the middle. Further study revealed that the outer rocky layer of the earth is fractured by a large number of faults that run north-south and east-west in all directions and that these faults are ten of thousands of kilometers

long 60-150 km deep traversing the whole thickness or the rocky sphere of the earth and communicating molten magma below the lithosphere to the bottom of the oceans and seas. From these fractures lava flows out building mountains in the middle of the sea - these are currently known as mid-oceanic ridges.

The highest land peak is Mt. Everest, 8,812 m above sea level. We have elevations rising at the bottom of seas and oceans that exceed 11 km.

One of the main features of our planet is its fractured nature. These fractures allow enormous amounts of molten rock to flow out and produce these mid-oceanic ridges. Unless the earth has these fractures that can communicate with the areas of high heat of the Earth's crust, life on Earth would have been virtually impossible. One wanders how the prophet (s) knew these facts since he (s) never rode the sea.

How would he know this unless Allah, the Creator, informed him. And why does the Qur'an refer to such unknown facts at the time of its revelation and for centuries to follow unless Allah knows in his eternal knowledge that the time will come when scientists can discover these facts and immediately realize that the Qur'an is the word of Allah and that Muhammad (s) was the seal of His Prophets and his messengers.

(88:17) THE CAMEL

"Do they not look at the Camels; how they are made?"

Do they not look at the Camels, how they are made? And at the Sky, how it is raised high? And at the Mountains, how they are fixed firm? And at the Earth, how it is spread out? Therefore do you give admonition, for you are one to admonish."

(Qur'an, 88:17-21)

It's beyond doubt that all beings reflect the endless power and knowledge of their Creator. This is expressed in numerous verses in the Qur'an where it is pointed out that everything created by Allah is actually a sign, that is, a symbol and warning. The 17th verse of the Surah Al-Gashiya tells us about an animal, which has to be carefully examined and thought about, which is the "camel."

In this section, we will study this animal on which the Qur'an invites us to ponder by the expression, "Do they not look at the Camels, how they are made?"

The exclusively specific characteristic of the camel is its body structure, which is not effected even by the most severe conditions. Its body has such features that it can survive for days without any water and food, and can travel with a load of hundreds of kilograms on its back for days. Many characteristics of the camel prove that this animal is created particularly for dry climate conditions, and given to the service of mankind.

"Verily, in the alternation of the night and the day, and in all that Allah hath created, in the heavens and the earth, are signs for those who fear Him."

(Qur'an, 10:6)

FEET SUITABLE FOR ALL LAND TYPES

The feet are comprised of two toes joined with an elastic pad. This structure which enables the animal to firmly grasp the earth is consisted of four fatty balls. It is totally convenient for all kinds of land conditions.

The toenails protect the feet from potential damages resulting from a bump. Knees are covered with callus, which is composed of skin as hard and thick as a horn. When the animal lies down on hot sands, this callused structure protects the animal from being injured by the extremely hot ground.

THE HUMP AS A FOOD STOCK

The hump of the camel, in the form of a mass of fats, provides nutriment to the animal periodically in times of starvation. With this system, this animal can live for 3 weeks without water, whilst it looses 33% of its weight. Under the same circumstances, a human being would lose 8% of his weight and die within 36 hours, completely losing the water in his body.

HEAT INSULATING FUR

This fur consists of thick and matted hairs that do not only protect the body of the animal against freezing and burning weather conditions, but also eliminate the water loss of the body. The Dromedary camel can delay the perspiration by increasing its body temperature up to 41^{0}C. By this way, it prevents water loss.

With its thick fur, camels in Asia can survive high temperatures rising up to +50 ^{0}C in summer and falling down to -50 ^{0}C in winter.

HEAD PROTECTED FROM THE SAND

Eyelashes have an interlocking system. In case of danger, they are automatically shut. The interlocking eyelashes do not let any dust particle to enter the eyes of the animal. The Nose and the ears are covered with long hairs to protect the animal from sand and dust.

Its long neck enables the animal to reach and feed on the leaves, 3 meters high from the ground. They can even feed on thorns.

EXTRAORDINARY RESISTENCE TO THIRST AND HUNGER

Camels can live without any food and water for 8 days at a heat of 50 ^{0}C. During this period, it looses 22% of its total body weight. While a man will be near death if he loses body water equal to about 12 percent of his body weight, a lean camel can survive body water equal to 40 percent of its body weight. Another reason of its resistance against thirst is a mechanism which enables the camel to increase its internal temperature up to 41 ^{0}C. Thanks to this, the animal keeps water loss at minimum level in the extreme hot climates of the desert daytime. They also can decrease their internal body temperature down to 30 ^{0}C in the cool desert nights.

IMPROVED WATER UTILIZATION UNIT

Camels can consume up to 130 liters of water almost in 10 minutes which is around one third of their body weight. Besides, camels have a mucus structure in their nose, which is 100 times larger than that of the humans'. With its huge and curved nose mucus, camels can hold 66% of the moisture in the air.

MAXIMUM BENEFIT FROM FOOD AND WATER

Most of the animals die by being poisoned when the accumulated urea in their kidney fuses into the blood. However, camels make maximum use of water and food by passing this urea numerous times through the liver. Both the blood and cell structures of

the camel are specialized in order to enable this animal to survive for long periods of time without water in desert conditions.

Cell walls have a special structure preventing extra water loss. Furthermore, the blood composition is designed so that it does not let any slowing down in the blood circulation even when water level in the camel's body decreases to the minimum. In addition, the amount of the albumin enzyme, which reinforces resistance against thirst, is found in much higher amounts in camel's blood than the other living things.

Hump is the other supporter to the camel. One fifth of the camel's total body weight is stored as fat in its hump. The storage of the body fat in only one part of the camel's body prevents the excretion of water from all around its body - which is dependent on fat. This allows the camel to use minimum amount of water.

Although a humped camel can take in 30-50 kilograms of food in a day, in tough conditions, it is able to live for one month with only 2 kg of grass a day. Camels have very strong and rubber-like lips, which allow them to eat thorns sharp enough to pierce stout leather. Moreover, it has a four chambered stomach and a very strong digestive system by which it can digest everything it eats. It can even feed on materials like caoutchouc, which cannot be looked upon as food. It is obvious enough how precious this quality is in such dry climates.

PRECAUTION AGAINST WINDWHIRLS AND STORMS

The eyes of camels have two eyelash layers. The eyelashes interlock like a trap and protect the eyes of the animal from harsh sandstorms. In addition, camels can close their nostrils to keep out sand.

PROTECTION AGAINST BURNING AND FREEZING WEATHER CONDITIONS

The thick and impenetrable hairs on the camel's body prevent scorching sun lights to diffuse into the skin of the animal. These also keep the animal warm in freezing weather. Desert camels are not affected by high temperatures up to 70 ^{0}C, and double-humped camels can survive in very low temperatures down to -50 ^{0}C. These kind of camels can survive even in the high vales, 4.000 meters above the sea level.

PRECAUTION FOR BURNING SAND

Feet of the camels, which are larger in ratio to its legs, are specially "designed" and enlarged to help the animal walk in the sand without being stuck in it. These feet possess spready and puffy qualities. In addition, the special thick skin under the feet soles, is a precaution for the burning desert sand.

"Do you not see that Allah has subjected to your (use) all things in the heavens and on earth, and has made his bounties flow to you in exceeding measure, (both) seen and unseen? Yet there are among men those who dispute about Allah, without knowledge and without guidance, and without a Book to enlighten them!"

(Qur'an, 31:20)

Let us think in the light of these informations: Has the camel adapted its own body to the desert conditions on its own? Has it formed the mucus in its nose or the hump on its back? Or has it designed its own nose and eye structure in order to protect itself against windwhirls and storms? Has it based its own blood and cell structure on the

principle of not wasting any water? Has it chosen itself the type of hair covering its body? Has it converted itself to a "desert ship" on its own?

Just as any other living being, the camel surely cannot perform any of those above, and make itself beneficial to mankind. The verse in the Qur'an stating, "Do not they look at the camel, how it is created?" explains the creation of this excellent animal in the best way. Like all other beings, camel, too, is endowed with many special qualities and then placed on earth as a sign of the excellence of the Creator in creation.

While it is created with such superior physical features, it is ordered to serve mankind. As for the humans, they are ordered to see similar miracles of creation throughout the whole universe and revere the Creator of all beings, who is Allah?

(89:1,3) THE EVEN AND THE ODD

"By the Dawn, And the Ten Nights, And the Even and the Odd."

(Qur'an, 89:1-3)

How did Mohammad (pbuh) know about the 20th century scientific fact of the " Electricity?" The Electricity falls under the "Shaf'i Wa Al-Witr" category. Protons carry Positive charge while the Electrons carry negative charge. Day & Night fall under "Shaf'i Wa Al-Witr" category. All Even & Odd matters fall under the "Shaf'i Wa Al-Witr" category.

(89:6,7) IREM - UBAR?

"Seest thou not how thy Lord dealt with the `Ad (people); Of the (city of) Iram, with lofty pillars; The like of which were not produced in (all) the land?"

(Qur'an, 89:1-14)

The Qur'an makes reference to a city Irem, which Allah destroyed for its evil doings. Until recently there was no record of this city, and it was believed to be only a legend. In 1991, in southern Arabian Desert's "Rub al Khali" in Oman, the 4300-year-old city of Irem "Ubar" was excavated. Underneath the dunes of sand, the city of Irem "Ubar" was found with its routes and more than 8 pillars of "horse shoe" shape towers.

The initial radar images yielded no direct indication of the location of the site, but images from the Landsat and SPOT remote sensing satellites showed distinct tracks through the desert. The researchers identified these tracks as old caravan routes. The caravan routes converged at a place called Ash Shisr, near the eastern edge of the Empty Quarter.

Excavations

The excavations uncovered a large octagonal fortress with thick walls ten feet high and eight tall towers at the corners. The archaeologists also found Greek, Roman, and Syrian pottery, the oldest of which was dated at more than 4,000 years old. The discovery of these types of artifacts from far away places indicated that this was indeed a major center for trade and likely the fabled Ubar. One startling result of the excavation was that it appears that Ubar did meet with a catastrophic end, as many of the legends describe.

The city is referred to as Iram, the "city of towers" in the Holy Qur'an, Surah Al-Fajr. Below we reproduce the English translation of part of the Surah by Abdullah Yusuf Ali.

The researchers speculate that the city may have been the earliest known shipping center for frankincense, a fragrant gum resin harvested farther south. The researchers have to overcome sandstorms and deadly vipers to locate the city's octagon-shaped stone walls, 6- to 8-foot-tall remnants of seven of its eight 30-foot-tall mud-brick towers, various rooms, frankincense burners and thousands of pieces of pottery.

Researchers found the city by tracing ancient desert roads detected in pictures taken from several spacecraft, including radar and optical cameras carried by Challenger in October 1984.

According to Abdullah Yusuf Ali, the city of Iram was the capital of the nation of Ad. Evidence indicates that the city fell into a sinkhole created when an underground limestone cavern collapsed. According to legend, Ubar was destroyed during a disaster about CE 100 and was buried by sand. The city probably had fewer than 100 residents, but was surrounded by numerous campsites marked by pottery, firepits and charcoal.

Previous efforts to find Ubar in Oman's dunes failed in 1930, 1947 and 1953.

(91:1) THE IMPORTANCE OF SUNLIGHT

Qur'an says:

"I swear by the Sun and its brilliance."

(Qur'an, 91:1)

"And He made dark its night and <u>brought out its light.</u>"

(Qur'an, 79:29)

If the Sun stopped shining, how would the temperature of the Earth change?

It would steadily get colder everywhere. Within a few weeks the oceans would have frozen solid, and after say a month or so, the atmosphere itself would have solidified on the surface. The interior of the earth would continue to provide some surface heat, but probably just enough to keep the atmosphere in a partially vapor phase. Volcanos would continue to erupt and liquify/gasify portions of the atmosphere/ocean areas in contact with the lava flows. Geothermal vents would continue to make geysers like the ones on Io.

The Earth cannot drop to Absolute Zero because the universe would keep it above 2.7 K. Without the Sun, the only energy to the surface of the Earth is the heat from it's own interior. All you have to do is go down a kilometer or two and you are already up to a temperature of 60 ^{0}C or more where deep diamond miners work. If the Sun went away, this would change only a slight amount as the Earth re-adjusts to a heat flow where the outer surface is no longer warmed by the Sun.

This heat flow is not enough to keep the earth above the freezing point of water, and that after perhaps a month or so, the latent solar heat stored in the oceans and crust would be exhausted. The temperature would stabilize probably somewhere below 200 K and be maintained thereafter by the heat flux from the Earth's interior for a few billion years.

(92:1) WHY THE UNIVERSE IS DARK?

We see stars all around, so why doesn't their combined light add up to make our night sky—and surrounding space, for that matter—bright? German physicist Heinrich Wilhelm Olbers put the same puzzle this way in 1823: If the universe is infinite in size, and stars (or galaxies) are distributed throughout this infinite universe, then we are certain to eventually see a star in any direction we look. As a result, the night sky should be aglow. Why isn't it?

In fact, the answer is far more profound than it appears. There have been many attempts at explaining this puzzle, dubbed, over the years. One version implicated dust between stars and perhaps between galaxies. The idea was that the dust would block the light from faraway objects, making the sky dark. In reality, however, the light falling on the dust would eventually heat it up so that it would glow as brightly as the original sources of the light.

Another proposed answer for the paradox held that the tremendous speed of distant galaxies - would move light out of the visible range into the invisible infrared. But if this explanation were true, shorter, wavelength ultraviolet light would also be shifted into the visible range—which doesn't happen.

"And He *made <u>dark its night</u> and brought out its light.*"

(Qur'an, 79:29)

"I swear by the night when it draws a veil."

(Qur'an, 92:1)

The best resolution to Olbers' Paradox at present has two parts. First, even if our universe is infinitely large, it is not. This point is critical because light travels at the finite (though very fast!) speed of about 300,000 kilometers per second. We can see something only after the light it emits has had time to reach us. In our everyday experience that time delay is minuscule: even seated in the balcony of the concert hall, you will see the conductor of the symphony raise her baton less than a millionth of a second after she actually does.

When distances increase, though, so does the time delay. For instance, astronauts on the moon experience a 1.5-second time delay in their communications with Mission Control due to the time it takes the radio signals (which are a form of light) to travel round-trip between Earth and the moon. Most astronomers agree that the universe is between 10 and 15 billion years old. And that means that the maximum distance from which we can receive light is between 10 and 15 billion light-years away. So even if there are more distant galaxies, their light will not yet have had time to reach us.

The second part of the answer lies in the fact that stars and galaxies are not infinitely long-lived. Eventually, they will dim. We will see this effect sooner in nearby galaxies, thanks to the shorter light-travel time. The sum of these effects is that at no time are all of the conditions for creating a bright sky fulfilled. We can never see light from stars or galaxies at all distances at once; either the light from the most distant objects hasn't reached us yet, or if it has, then so much time would have had to pass that nearby objects would be burned out and dark.

(95:15,16) THE QURAN ON THE CEREBRUM

Allah said in the Qur'aan about one of the evil unbelievers who forbade the Prophet Muhammad (sallallahu 'alaihi wa sallam) from praying at the Ka'abah:

"Let him beware! If he does not stop, We will take him by the forelock (front of the head), a lying, sinful forelock!"

(Qur'an, 96:15-16)

Why did the Qur'aan describe the front of the head as being lying and sinful? Why didn't the Qur'aan say that the person was lying and sinful? Is there a relationship between the front of the head and lying and sinfulness?

The Arabic word *nasiyha* means forelock. If we look into the skull at the front of the head, we will find the prefrontal area of the cerebrum. What does physiology tell us about the function of this area? A book entitled, Essentials of Anatomy & Physiology, says about this area: The motivation and the foresight to plan and initiate movements occur in the anterior portion of the frontal lobes, the prefrontal area. This is a region of the association cortex...

The book also says: In relation to its involvement in motivation, prefrontal area is also thought to be the functional center for aggression... So, this area of the cerebrum is responsible for planning, motivating, and initiating good and sinful behavior, and is responsible for telling lies and speaking the truth. Thus, it is proper to describe the front of the head as lying and sinful when someone lies or commits a sin, as the Qur'an said: "***... A lying, sinful aasiyyah (front of the head)!"***

Scientists have only discovered these functions of the prefrontal area in the last sixty years, according to Professor Keith Moore.

(99:2) REVERSAL OF GRAVITY

Gravity is due to minute differences in time at different heights. Time passes at slightly faster rate at the top of a mountain as compared to sea level. This difference in time although imperceptible to us, can be measured with the aid of atomic clocks. If time reverses in the contracting phase of the universe then this time difference will also reverse. This will cause the gravity to reverse producing an earthquake of a magnitude never seen before.

"When earth is shaken with her final earthquake."

(Qur'an, 99:1)

"When the trumpet is blown one blast. And the earth with the mountains shall be lifted and crushed with one crash."

(Qur'an, 69:13-14)

Breaking up of mountains, throwing out of molten lava:

"When the sky will be like molten copper and hills will be like flakes of wool."

(Qur'an, 70:8)

Despite reversal of gravity, mass of the earth will not disperse completely, as reversal of time will constantly direct all the matter to return to its previous position.

(99:4) THE CENTER SKY IN THE HOLLOW EARTH

As reversal of gravity change the earth into a hollow structure, sky or heaven will also changed so that it will be in the center of the hollow earth.

"On the day when the earth will be changed to other than this earth, and the heavens also. And they will come forth unto Allah, The One The Almighty."

(Qur'an, 14:48)

The following verses describe the Day of Judgment in a comprehensive manner.

The Day of Judgment will start with the final earthquake as the gravity reverses. The reversal of gravity will cause the earth to throw out all that was inside it to become completely empty.

The people will come back alive one after another, (in scattered groups) inside this hollow earth that will have sky towards its center. The history of nations will be played back as time passes backwards. Nations as well as people will then see what they had done before, and they will be judged accordingly.

1. "When earth is shaken with her final earthquake.
2. And earth yields its burdens. (From within)
3. And man says what aileth her.
4. That day she will relate her chronicles. (History in time)
5. Because your Lord inspires her.
6. That day mankind will issue forth (from earth) in scattered groups to be shown their deeds."

(Qur'an, 99:1-6)

To an inquiring mind it may occur now that reversal of time will lead to resurrection from the grave and then we should get younger, go through our childhood and regress into nothingness in our mothers wombs. This is what the time reversal theories would have us believe; again a purposeless exercise. Well not quite so. The great earthquake is not to scare us it is part of the phenomenon that will make the higher dimensions, the beyond, accessible. That is where, is hell and the gardens of Eden.

(101:1-5) IMPACT- CATASTROPHIC COLLISION

Let's see what Qur'an says about The Catastrophic Collision:

The Catastrophic Blow!
What is The Catastrophic Blow?
And, what will convey unto thee what The Catastrophic Blow is?
A Day when men will be like moths scattered,
And the mountains will be like carded wool.

(Qur'an, 101:1-5)

What is The Catastrophic Collision Qur'an talking about? What is The Catastrophic Collision with so disastrous consequences to the Earth and living creatures on it?

A thing visible from the Qur'an is that The Collision will make like moths scattered, and make the mountains be like carded wool. The mountains, people and animals will be swept away, earth crumbled. Experts say: It is possible only if the Earth stopped spinning or the rotation axis of the Earth changed! - and that can coze cataclysmic impact of planet-sized body.

The spin axis of Earth and its spin energy are extremely robust and it would require a close encounter with another planet -sized body to torque the Earth into a substantially different orientation. Such and encounter would last a week for a deep encounter, and the tectonic upheavals would be tremendous, horrible, etc etc.

The surface of the Earth would become molten as the tremendous tidal energies are dissipated. NO ONE would possibly survive it and the biosphere+atmosphere would be transfigured.

"And the earth and the mountains are borne away and crushed with a single crushing."

(Qur'an, 69:14)

"On the day when the earth and the mountains shall quake and the mountains shall become (as) heaps of sand let loose."

(Qur'an, 73:14)

"And when the hills are moved."

(Qur'an, 81:3)

If that case, the atmosphere would still be in motion with the Earth's original 464 ms^{-1} rotation speed at the equator. All of the landmasses would be scoured clean of anything not attached to bedrock. This means rocks, topsoil, trees, buildings, animals, and so on, would be swept away into the atmosphere.

An appreciable change in rotation direction would produce winds with speeds of thousands of miles per hour EVERYWHERE. Anything not anchored to bedrock would be torn out of the soil and mixed with a world-enveloping hurricane of activity. The Earth would remain engulfed in thick clouds of dirt, dust and debris for decades. I cannot imagine anything surviving such a catastrophe, because the solid Earth would be wracked by earthquakes the likes of which have never been experienced by living organisms in over 3 billion years or more. There would be no spot on the Earth not affected by 100 - 500 mile per hour winds and earthquakes of magnitude +7 and MUCH HIGHER.

Any scenario that includes such a catastrophe would have to presume the complete destruction of the biosphere as a given. The only survivors would be bacteria. The tidal forced exerted upon the Earth would be enough to raise the surface of the earth several miles or more, and the tidal energy would probably be enough in a close encounter to liquify large portions of the crust.

If the collision was a direct one with a body, say, as large as the asteroid Ceres (450 kilometers) this would produce a crater larger than the continent of North America, and probably be enough of an impulse to cause the axis of the Earth to precess with a very large amplitude over thousands of years. Most solar system bodies are 1) orbiting the Sun in the same sense as the Earth is rotation, so such impacts probably would not greatly affect the spin direction, but might increase the spin rate so that a day might be several hours shorter than the standard 24 hours. If the impact is a grazing collision, portions of the Earth's mass would be ejected into space to orbit the Earth, be lost from the Earth's gravitational field, or eventually rain back upon the Earth as a lethal meteor storm lasting hundreds or thousands of years. There are lots of other things of greater likelihood that are bound to happen to the Earth in the next hundred thousand years that would be more local, but still lethal.

The polar ice caps would be melted by any change in the mean global temperature, and the changing wind patterns and tectonic activity would provide a more than adequate source of heating. After they melted, and the sea level rose by 30 feet, they would eventually reform when the Earth settled down to its new spin orientation assuming the temperature of the atmosphere returned to current levels. Perhaps millions of years would be needed to quell the vulcanism that must surely result from such a

realignment. The carbon dioxide level in the atmosphere and the consequent Greenhouse Heating would probably stay with the Earth for millennia.

The number of the seasons would change and their duration. If the rotation axis became parallel to the orbital plane, as for Uranus, we could have winter in the Northern Hemisphere for 6 months followed by summer. The Sun would set on the entire Northern Hemisphere and not rise again for 6 months. Less extreme axial tilts would produce a different pattern of seasons at each earth latitude.

Growing seasons and all of the natural cycles of the biosphere would be catastrophically affected, and if the change happened in a year or so, no living things, especially plants, would survive unmolested. There would not be enough time for plants to genetically alter their growing cycles. Large diebacks of plant ecosystems would occur followed by the animals that feed on the plants, and then the carnivores...etc etc.

The End

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